

DESIGN OF OFFICE AND BANK FURNITURE IN THE EUROPEAN  
COMMUNITY IN THE 1980S IN RELATION TO SOCIETY AND  
CULTURE.

EFSTATHIOU ANNA

PHD IN DESIGN

HERIOT-WATT UNIVERSITY

SCHOOL OF DESIGN AND CRAFTS

1994

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognize that the copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the prior written consent of the author or the University (as may be appropriate).

## **ABSTRACT.**

The thesis is an exploratory study of the interaction between design and its context. It takes the view that industrial design is an integral part of, and an active agent within the institutions of society and culture. It argues that the material form of any industrial product reveals the values of its context. It applies a theoretical model to the above-mentioned relationship. The objective is to explore design as an expressive system, through which concepts and meanings are signified by material forms. Product semantics is used as an analytical system for the investigation of the significative properties of design.

A major theme within the thesis is the investigation of office furniture and bank interiors in the European Community from the mid-1970s onwards. This case study aims to clarify the relationship between sociocultural values and the manipulation of form, applying to contemporary office furniture production the above-mentioned theoretical issues. A survey was undertaken in order to provide evidence. It deals on the one hand with contemporary office furniture production and on the other with its use in bank interiors.

Although emphasis is placed on contemporary office furniture, the wider contribution of the study lies in providing a global understanding of the effects of context on design. This may interest designers and decision makers who aim to consciously manipulate design.



# CONTENTS

	page
<b>List of Illustrations.</b>	v
<b>Acknowledgements.</b>	x
<b>Abstract.</b>	xi
<b>Introduction.</b>	xii
 <b>Chapter one:           The Social Origin of Design.</b>	 1
1.1. The relationship of Design with Society and Culture.	1
1.2. The Social and Cultural Origin of Aesthetic Response.	5
1.3. Introduction to the Method of Investigation.	7
1.3.1. Model of Analysis.	7
1.3.1.1. Functional Factors.	8
1.3.1.2. Technological Factors.	8
1.3.1.3. Social Factors.	9
1.3.1.4. Cultural Factors.	9
1.3.1.5. Economic, Political and Legislative Factors.	9
1.3.2. Methodology.	12
1.4. A Historical and Social approach of the Development of the Office.	18
1.5. Functional and Structural Aspects of the Contemporary Office.	22
References	24
 <b>Chapter two:           The Socio-economic and Cultural Context of Contemporary European Design.</b>	 27
A Survey of the Socioeconomic and Cultural Tendencies and Technological Developments in the Western World During the 1970s and 1980s with Particular Reference to the European Economic Community.	27
2.1. The Beginning of a New Era. The 1970s and the 1980s in Comparison to the Previous Post War Years and the Main Reasons of the Shifts in Western Societies.	28
2.2. Major Changes and Social Characteristics Since the Early 1970s.	31
2.2.1. Flexibility.	31
2.2.2. Flexible Employment.	31

2.2.3. The Role of the State.	31
2.2.4. Financial Systems.	32
2.2.5. Small Businesses.	32
2.2.6. Innovation.	32
2.2.7. Green Issues.	33
2.2.8. Turn-over Time.	34
2.2.9. Information Technology - Knowledge.	34
2.2.10. Growth in the Services Sector.	35
2.3. Contemporary Culture and Aesthetics.	38
2.4. Germany, Greece, Italy, Spain and the United Kingdom in the 1980s.	42
2.4.1. German Design.	42
2.4.2. Greek Design.	51
2.4.3. Italian Design.	57
2.4.4. Spanish Design.	65
2.4.5. British Design.	70
References	76
 <b>Chapter three:</b>	
<b>The Meanings of Office Design.</b>	80
3.1. On Communication.	81
3.1.1 Communication and Signification.	81
3.1.2. Verbal and Non Verbal Communication.	83
3.2. Meaning and Office Furniture Products.	85
3.2.1. The Meaning of Objects in Human Social Life.	85
3.2.2. The Notion of Meaning.	90
3.3. Design of Products as a Signification System: Product Semantics.	98
3.3.1. Codification in Design.	98
3.3.2. Syntagmatic and Associative Relationships in Design.	101
3.3.3 Signifiers and Signifieds.	102
3.3.4. Physical and Significant Forms.	103
3.3.5. Denotation and Connotation.	104
3.3.6. Indicators, Signals and Intentional Indicators.	104
3.4. Application of Product Semantics in the Contemporary Market System.	106
References	108

<b>Chapter four:</b>	<b>Contemporary Tendencies in the Development of the Office.</b>	
	Analysis of the Study Findings.	111
	4.1. Economy and Office Furniture Production	112
	4.2. Office Furniture and the Market System.	114
	4.3. The Role of Design and Designers in the Formation of the Office.	118
	4.4. Concepts that Ideally Should be Expressed by the Working Environment in Banks.	121
	4.5. Typical Characteristics of a Contemporary Interior in European Banks in the 80s.	122
	4.6. Associations of Material Substances and Their Immaterial Properties in the Contemporary Office.	152
	4.6.1. Materials.	152
	4.6.2. Colours and Shading.	157
	4.6.3. Textural Attributes.	163
	4.6.4. Formal Manipulations	166
	4.6.5. Construction and Technology.	170
	References	172
 <b>Chapter five:</b>	 <b>Contemporary Europe and its Associated Values as Signified in the Design of Office Interiors in Banks.</b>	 173
	5.1. Application of Model of Analysis to the Particular Area	174
	5.1.1. Functional Factors.	174
	5.1.2. Technological Factors.	175
	5.1.3. Social Factors.	176
	5.1.4. Cultural Factors.	176
	5.1.5. Economic, Political and Legislative Factors.	177
	5.2. Contemporary European Office in the 1980s.	179
	5.3. Office and Bank Furniture Design in a Cross-Cultural Investigation.	193
	5.3.1. German Design and the VOKO system for a bank branch.	193
	5.3.2. Greek design and the 'Kiranis' office desk.	196
	5.3.3. Italian design and the Matteograssi office chair.	200
	5.3.4. Spanish design and the cashier desk of a Hispano Americano Bank branch.	203
	5.3.5. UK's design and the Antocks Lairn's 'Executive' chair	206

5.3.6. General Comments on Cultural Diversity in the European Office Design.	209
References	213
<b>Epilogue.</b>	214
<b>Bibliography.</b>	217
<b>Appendix</b>	
<b>I.</b> Market Survey: List of Subjects.	
<b>II.</b> Questionnaire on Contemporary Office Furniture Design and Production.	
List of Charts.	
Analysis of the Questionnaire: Diagrams and Tables.	
<b>III.</b> Questionnaire on the Working Environment and the Use of Furniture in Banks.	
List of Charts.	
Analysis of the Questionnaire: Diagrams and Tables.	



## LIST OF ILLUSTRATIONS

### FIGURES

- Fig. 1** Traditional desk of the 19th c. From *Objects of Desire, Design and Society 1750-1980*, by Adrian Forty, (London, 1987), p. 124.
- Fig. 2** Flat top desk (c. 1915). From *Objects of Desire, Design and Society 1750-1980*, by Adrian Forty, (London, 1987), p. 126.
- Fig. 3** Typist's desk (c. 1915). From *Objects of Desire, Design and Society 1750-1980*, by Adrian Forty, (London, 1987), p. 131.
- Fig. 4**
- a. Retro design: Nissan Figaro car, 1991. From *Japan Design* by Matthias Dietz and Michael Mönninger, (Cologne, 1992), p. 128.
  - b. Retro design: SW-1 Suzuki motorcycle. From *Japan Design* by Matthias Dietz and Michael Mönninger, (Cologne, 1992), p. 131.
- Fig. 5**
- a. Heater designed by Dieter Rams, 1955. From *Design in Context*, by Penny Sparke, (London 1987), p.207.
  - b. Hair dryer designed by Dieter Rams for Braun. From *World Design. Nationalism and Globalism in Design*, by Hugh Aldersey-Williams, (New York, 1992), p. 30.
  - c. '850' table designed by Dieter Rams for Vitsoe, 1985. From *World Design. Nationalism and Globalism in Design*, by Hugh Aldersey-Williams, (New York, 1992), p. 31.
- Fig. 6** Lighting fixture designed by Roy Fleetwood for Erco Leuchten, 1991. From *World Design. Nationalism and Globalism in Design*, by Hugh Aldersey-Williams, (New York, 1992), p. 31.
- Fig. 7** Iron and ironing board designed by Frogdesign (1986/7). From *80s style, Designs of the decade*, London 1990, p. 210.
- Fig. 8** Lounge chair, 'Consumer's rest' designed by Frank Schreiner/Stiletto. From *80s style, Designs of the decade*, London 1990, p. 70.



- Fig. 9** Table sculpture designed by Tony Cragg. From *80s style, Designs of the decade*, London 1990, p. 84.
- Fig. 10** Table or floor lamp designed by Martin Bedin. From *80s style, Designs of the decade*, London 1990, p. 114.
- Fig. 11** Table 'Tankette' designed by Paolo Pallucco & Mireille Rivier. From *80s style, Designs of the decade*, London 1990, p. 82.
- Fig. 12** Sofa 'A roten luck easy chair' designed by Bohuslav Horak. From *80s style, Designs of the decade*, London 1990, p. 76.
- Fig. 13** Rotis typeface designed by Otl Aicher. From *World Design. Nationalism and Globalism in Design*, by Hugh Aldersey-Williams, (New York, 1992), p. 33.
- Fig. 14** Train schedule terminal designed by Kunstflug. From *World Design. Nationalism and Globalism in Design*, by Hugh Aldersey-Williams, (New York, 1992), p. 35.
- Fig. 15** a. 'Epsilon' trolley designed by Artion. From *TEYXOΣ*, vol. 1, p. 211.  
b. Dining table 'Carnai' and chair 'Arpa' designed by A. Varotsos. From *TEYXOΣ*, vol. 4, p. 130.
- Fig. 16** Hangers designed by C. Panopoulos. From *Design in Education*, in newspaper 'Καθημερινή', 11 July 1993, p. 12.
- Fig. 17** a. 'Varia' chair designed by Artion. From *TEYXOΣ*, vol. 1, p. 211.  
b. 'Von Vogelsang' chair designed by Philippe Starck. From *80s style, Designs of the decade*, London 1990, p. 53.
- Fig. 18** a. Tableware designed by Eleni Mitropoulou. From *TEYXOΣ*, vol. 3, p. 114.  
b. Coffee-pot designed by Aldo Rossi. From *80s style, Designs of the decade*, London 1990, p. 127.
- Fig. 19** a. 'Murmansk' fruit bowl manufactured by Memphis, Italy. From *80s style, Designs of the decade*, London 1990, p. 133.  
b. Traditional African stool from Zaire. From *African Furniture and household objects*, by Sleber Roy, (Indiana University Press 1980), p. 126.

- Fig. 20** Kettle designed by Richard Sapper for Alessi. From *80s style, Designs of the decade*, London 1990, p. 131.
- Fig. 21** Teapot 'Cupola' designed by Mario Bellini for Rosenthal. From *80s style, Designs of the decade*, London 1990, p. 139.
- Fig. 22** Armchair 'Wink' designed by Tokiyuki Kita. From *80s style, Designs of the decade*, London 1990, p. 38.
- Fig. 23** Room divider 'Carlton' designed by Ettore Sottsass. From *80s style, Designs of the decade*, London 1990, p. 17.
- Fig. 24** Lamp 'Eddy' designed by Carlo Bellini and Marco Ferreri. From *80s style, Designs of the decade*, London 1990, p. 94.
- Fig. 25** Armchair '4814' designed by Anna Castelli-Ferrieri. From *80s style, Designs of the decade*, London 1990, p. 59.
- Fig. 26** Wall lamp 'Foglia' designed by Andrea Branzi. From *80s style, Designs of the decade*, London 1990, p. 121.
- Fig. 27** Desk 'Carlton House Butterfly, designed by Jaime Tressera Clapes. From *80s style, Designs of the decade*, London 1990, p. 61.
- Fig. 28** Stool 'Duplex' designed by Mariscal. From *New Spanish Design* by Guy Julier, (London 1991), p. 53.
- Fig. 29** 'Toledo' chair designed by Jorge Pensi. From *New Spanish Design* by Guy Julier, (London 1991), p. 74.
- Fig. 30** 'Gaulino' stools designed by Oscar Tusquets. From *New Spanish Design* by Guy Julier, (London 1991), p. 69.
- Fig. 31** a. Digital watch 'Black Watch' designed by Clive Sinclair. From *British Design, Image and Identity*, by Frederique Huygen, London 1989, p. 55.  
b. Pocket television designed by Clive Sinclair. From *British Design, Image and Identity*, by Frederique Huygen, London 1989, p. 55.
- Fig. 32** Vacuum cleaner 'Cyclon' designed by James Dyson. From *British Design, Image and Identity* by Frederique Huygen, London 1989, p. 61.
- Fig. 33** a. Table 'Antelope' designed by Matthew Hilton. From *80s style, Designs*

*of the decade*, London 1990, p. 60.

**b.** Table 'Flipper' designed by Matthew Hilton. From *80s style, Designs of the decade*, London 1990, p. 61.

- Fig. 34** Campaign for the conservative party, art director Saatchi & Saatchi, Britain 1979. From *British Design, Image and Identity*, by Frederique Huygen, London 1989, p. 167.
- Fig. 35** Vase designed by Carol McNicoll. From *British Design, Image and Identity*, by Frederique Huygen, London 1989, p. 125.
- Fig. 36** Service desk without glass protection in a German bank. Dresdner Bank.
- Fig. 37** Open space arrangement in a British Bank. Yorkshire Bank.
- Fig. 38** Comfortable armchairs in the waiting area of a British bank. Yorkshire Bank.
- Fig. 39** Service desk with glass protection in a British bank. Clydesdale Bank.
- Fig. 40** Open space arrangement in a Spanish bank. Banco Hispano Americano.
- Fig. 41** Service desks with glass protection in Spanish banks.  
**a.** Banco Zaragozano, **b.** Banco Urquijo.
- Fig. 42** Writing desk for clients in a Spanish bank. Banco Hispano Americano.
- Fig. 43** Readable signage in an Italian bank. Banca Popolare dell' Emilia.
- Fig. 44** Comfortable armchairs in waiting areas in an Italian bank. Credito Varesino spa.
- Fig. 45** Service desks without glass protection in an Italian bank. Credito Varesino spa.
- Fig. 46** Comfortable armchairs in a Greek bank. Agricultural Bank Of Greece.
- Fig. 47** Personal objects in an executive office in a Spanish bank. Banco Urquijo.
- Fig. 48** Chair for women executives by Martinstoll.
- Fig. 49** Laminates in office furniture.  
**a.** Clydesdale Bank (UK), **b.** Banco Zaragozano (Spain).
- Fig. 50** Upholstered office furniture. Banco Zaragozano (Spain).
- Fig. 51** Wooden tellers. Yorkshire Bank (UK).



<b>Fig. 52</b>	Accessories for office furniture. Marcatré (Italy).
<b>Fig. 53</b>	Use of a variety of materials in office furniture: a. wood, b. metal, c. leather, d. plastic, e. laminates, f. fabric
<b>Fig. 54</b>	Dark shades in a bank interior. Banco di Roma (Italy).
<b>Fig. 55</b>	Office furniture in pastel/light shades.
<b>Fig. 56</b>	Smooth (soft) textures of materials used in office furniture
<b>Fig. 57</b>	Rough textures of materials in office furniture
<b>Fig. 58</b>	Simple form and design of office furniture. B&B Italia (Italy).
<b>Fig. 59</b>	Rounded shapes in the form of office furniture. Drabert (Germany).
<b>Fig. 60</b>	Sharp shapes in the form of office furniture. Magpie (UK).
<b>Fig. 61</b>	Combination of materials in the form of office furniture. Marcatré (Italy).
<b>Fig. 62</b>	Colour differentiation indicates differentiation and individuality.
<b>Fig. 63</b>	Executive furniture. Matteograssi (Italy), VOKO (Germany).
<b>Fig. 64</b>	Desk with adjustable height. Scala (Germany).
<b>Fig. 65</b>	Links adjusting to different angles. COM (Italy).
<b>Fig. 66</b>	Infrastructure of a secretarial chair. SEDUS (Italy).
<b>Fig. 67</b>	Wire management in office furniture. B&B Italia (Italy), COM (Italy).
<b>Fig. 68</b>	Banks using traditional buildings. a. Dresdner Bank, b. Agricultural Bank of Greece.

## TABLES

<b>1</b>	Description model of the factors influencing the form of a product.
<b>2</b>	Mental world concepts.
<b>3</b>	Description model of the factors influencing the form of contemporary office in the European Community in the 1980s.

## ACKNOWLEDGEMENTS

My first acknowledgements go to my supervisors Dr. Stanley Moody and Mr. Les Mitchell. Our discussions have improved my understanding of the issues addressed by the thesis. Their contribution to the thesis and their support is invaluable.

I would like to thank the Director of School of Design & Crafts Mr. Douglas Brown for his constant concern and important suggestions, Dr. Colin Bailey for stimulating discussions, and the secretaries of the Design Office and the staff of the College Library for their continuous support and help.

I am grateful to Mr. Peter Mudie who helped me with the method of the synthesis of the questionnaires, and to Mrs. Paola Baxter, Mr. Franz Weis, and Dr. Luis Pineda who helped me with the translations of parts of the case study. Also, the respondents that participated in the survey for providing me with source material studied throughout the thesis.

I would like to thank my family for their understanding and support during the writing of the thesis and especially my husband Dr. Stavros Vergopoulos for his invaluable help on the use of software in the implementation and the analysis of the survey.

The thesis is supported by the Greek State Scholarships Foundation.



## ABSTRACT.

The thesis is an exploratory study of the interaction between design and its context. It takes the view that industrial design, is an integral part of and an active agent within the institutions of society and culture. It argues that the material form of any industrial product reveals the values of its context. It applies a theoretical model to the above-mentioned relationship. The objective is to explore design as an expressive system, through which concepts and meanings are signified by material forms. Product semantics is used as an analytical system for the investigation of the significative properties of design.

A major theme within the thesis is the investigation of office furniture and bank interiors in the European Community from the mid-1970s onwards. This case study aims to clarify the relationship between sociocultural values and the manipulation of form, applying to contemporary office furniture production the above-mentioned theoretical issues. A survey was undertaken in order to provide evidence. It deals on the one hand with contemporary office furniture production and on the other with its use in bank interiors.

Although emphasis is placed on contemporary office furniture, the wider contribution of the study lies in providing a global understanding of the effects of context on design. This may interest designers and decision makers who aim to consciously manipulate design.

## INTRODUCTION.

Design as a process consists of a number of decisions taken by the designer, or the maker, who 'embodies' values and concepts in material form. These values and concepts are determined to a great extent by factors external to design such as social, cultural, economic, technological, political and legislative.

The thesis is an exploratory study, an investigation of the relationship between sociocultural factors and the designed object. It concentrates on bank interiors and office furniture in the context of the European Community in the 1980s. It was motivated by an awareness of ambiguities and different views of designers, managers, employees and clients on the design of the banking environment, experienced personally by the author of the thesis when working in the premises' office of a bank, as well as by the increasing attention given by the specialised press and the public to the values projected by a product besides its function. Reference to the sociocultural tendencies of the particular context complements the theoretical background. The objective is to investigate the design of contemporary office furniture and bank interiors when perceived as signification of the sociocultural values of the particular context. The method of approach for the analysis of meaning in design is through product semantics. Ambiguities and slight disagreements between scholars in this field are of little consequence because research on semiotics is not the aim of the study; rather some of its features are used to aid the analysis of the perceptual process that correlates meanings and forms.

The theoretical approach together with the findings of the case studies, focus on the contemporary working environment and the rules that define its synthesis. However, the evaluation of the subject of the thesis provides an understanding of the relation between material forms and concepts applicable to other areas of design. The marketing and designing of the banking system could benefit from a thorough study of the invisible

'infrastructure' of the banking environment by using this study as a model to interpret the needs of the public and to foresee consequences.

The thesis consists of five chapters. **Chapter One** sets out the basis for the theoretical approach to the study. It introduces a model which takes into account the effects of external factors on designing. This model supports the particular investigation of the contemporary office in the European Community from the late 1970s onwards. The development of the office is correlated with context. **Chapter Two** identifies the external factors as they appear in the European Community in the 1980s, and especially in a sample of five countries: Germany, Greece, Italy, Spain and the United Kingdom. This approach defines the context of the contemporary office then correlates it with the characteristic designed forms of the period. **Chapter Three** considers the meaning of objects and the theories of semiotics and product semantics in order to identify the elements of contextual significance within material objects. It suggests strategies for a closer investigation of the ways that material objects participate in human affairs. **Chapter Four** examines the evidence from the field study, obtained by questioning subjects from the sample of the five countries mentioned above. The survey has two points of focus - contemporary office furniture production and the working environment in banks - as a means of investigating the relationship between people and infrastructure. This enables office furniture design to be defined as a signification system. **Chapter Five** is an overview of the study. The data from the survey is applied to the model introduced in Chapter One in order to identify the aesthetic tendencies and characteristic forms in contemporary office furniture designed for use in banks within countries of the European Community. It also includes design case-studies from the countries selected investigating the theme of cultural diversity.



# **1. THE SOCIAL ORIGIN OF DESIGN.**

Design as a process, and as the outcome of this process, projects the priorities of the individual designer. However, any particular designer, especially in the field of industrial design, sets his/her priorities according to the needs of the targeted group and the function to be served, the possible materials or methods of production, the final cost, the number of products, the possible life-time, competitive products and so on. Therefore, the designed product obtains some of its characteristics through the interaction of the particular designer with a number of other determinants.

It is argued that design is directly related and actively participating in society and culture, being an expression of their values, but also a determinant of changes within them, through objects, institutions and individuals. Any product is the result of a transformation of information into an artifact. The designer is the person that translates, according to his/her idiosyncrasies, information into form and deals with the links between the various determinants. A description-analysis model provides the basis for the method of the investigation of industrial products and in particular, office furniture production. Social, cultural, technological, economic, legislative, political and functional factors are the most important factors that affect the form of a product.

The above approach supports the investigation of the ways design and society affect each other with particular reference to the office. The development of the office is approached historically and correlated with changes of social, cultural, technological and functional changes.

## **1.1 The Relationship of Design with Society and Culture.**

Design, as a term, is widely used nowadays by the mass media and a large part of

the public to mean the manipulation of the appearance of objects so that they meet the aesthetic preferences of intended groups. Besides referring to the appearance of things, design is also the process that has, as a visual outcome, the object itself. Design, as a process, and as the visual outcome of this process (1), is closely related to its context and actively participates in society and culture. Adrian Forty declares that 'the design of manufactured goods is determined not by some internal genetic structure but by the people and the industries that make them and the relationships of these people and industries to the society in which the products are to be sold' (2). In the present study it will be argued that designed products and design activities both reflect and determine shifts within a culture. Furthermore, it will be stressed that the outcome of the active interrelation between design and its social and cultural context is reflected, in terms of concepts and ideologies, in the form of functional objects.

In order to place design, and particularly industrial design, in a social and cultural background, it is necessary to subscribe to the idea that, besides function and use, appearance is affected by the structure of a particular society and culture, by time and by place. Related to this concept is the notion of 'taste'. The taste of the public, it will be argued, is mainly created by sociocultural factors and therefore there is more than one objective way to judge appearance. It will be concluded that the appearance and form of functional objects is determined by flexible, temporal factors in order to satisfy the demands of the public .

Inevitably, the form of products, being affected by sociocultural forces, becomes the carrier of the dominating concepts of a particular society. Office furniture design was chosen to be the frame of reference of this study. A number of reasons favour this choice, especially the plethora of concepts associated with the field; furniture, beyond serving the needs of comfort, can also be a status symbol. Additionally, the role of the office is of major importance in contemporary society as the world economy is to a great extent determined by the services sector.



Design is an affair between man and life, an attitude towards action and as such it creates things associated with any aspect of life. Design has always been inseparable from man's social life, producing results that he could feel, see, smell and generally comprehend through his senses. Design seen as such contributes to the way people live; and the way people live is their culture. Thus, design is a cultural phenomenon, creating physical, as well as abstract conditions. Culture is perceived here as 'the code we learn and share' (3) with other people. Maldonado, identifies industrial design as a creative activity whose aim is to determine the formal qualities of objects produced by industry. These formal qualities include the external features, but are principally those structural and functional relationships which convert a system into a coherent unity, from the point of view of both the producer and the user. Industrial design extends to embrace all aspects of the human environment which are conditioned by industrial production (4).

Design, in its wide sense - as a concept and as a creative act - is not a characteristic of the industrial era. In primitive and non-industrial societies, as well as in technologically advanced ones, designing is based on the same rationale; it serves the need of man for physical or spiritual survival (5). However, the means, the raw materials, the skills, the traditions, the laws, the social norms, or the economic situations differ in time and place. Their variety reflects the needs and the values of different societies, and consequently objects become, by their very existence, expressions of attitudes of the people and the cultures that have created them. Moreover, general social and economic forces within cultural systems interact with people's traditions and life styles, having resultant consequences in design and aesthetic form.

The close connection of manipulation of form to specific cultures is interpreted by many as the expression of the unique identity of that particular culture. On this subject, Stanley Moody (6) argues that people tend to link objects with the personality of their creators and they view the strangeness of foreign artifacts, urban layout and dress of foreign peoples not in absolute terms, but in some way related to the character of those

people.

Kenji Ekuan<sup>1</sup> describes the existence of underlying aspects formulating a nation's attitude towards the creation of things, saying that it is worthwhile to explore them, for a nation's culture is an unregistered patent (7). This patent, in his view, cannot be registered anywhere and contains all the secrets of that nation's methods, ways and aesthetic. He expresses the view that shape and form of material things are values reflecting the society of the time. Be it a plastic cup or a telephone, the working of the society, the existing technology, and people's sense of values are embodied in design. In this sense, the form of an object is an integration of the complexities of a society, an integration achieved by design (8). Nowadays, factors like mass communication media, multinational companies and technological developments create an international influence on cultures, making this integration more complicated. These factors influence and sustain contemporary design.

It is often taken for granted that the designed object owes its form to the particular individual who designed it. This is partly true as each individual interprets values differently, but it is also true that inevitably a statement is made about these values, expressing through it their influence upon the individual. This statement shows in the product. Therefore, the values conveyed in the product are to a great extent determined by factors external to the individual, deriving from the socioeconomic context, from the culture, the tradition, the political situation of the country, and the technology of the time. The appearance of products at a particular time and in a particular place is, broadly a result of influences within the social framework (9). But is design only an expression of these influences and values, or has it also the power to determine them? Design often influences people to accept or reject certain attitudes towards life. In the hands of skilful designers, manufacturers and promoters, design can become an agent of change towards the values, standards, and life-style of a particular group. A relevant example is the Deutscher Werkbund, which promoted the adoption of high aesthetic standards in the mass

---

<sup>1</sup>President, GK Industrial Design Associates, and ICSID Senator



production of German consumer goods. It persuaded manufacturers to provide new products with a consistency of form, a consistency that after a while was regarded as good taste. Thus, the development of, and the influences on, design activities both reflect and determine changes within a culture.

## **1.2 The Social and Cultural Origin of Aesthetic Response.**

As already discussed, design activities and products are inseparable from man's social life and are interactive. Moreover, this interaction does not concern only the function, the use, or the existence of products, but also the form. The form of a product, besides serving specific functional requirements and embodying the statement of its maker, is related to the aesthetic preference of the users, i.e. their taste. Taste can be defined as the nature of the aesthetic response and is widely acknowledged in spite of the ambiguities associated with it. One of them concerns its origin. It is questioned whether this response should be a standard one, applicable to everyone, or is it only an outcome of factors created by different temporal and social causes, and therefore variable? The former seems unacceptable. There could never be only one right aesthetic response among people who perceive things in different ways and interpret form and visual expressions according to their backgrounds, cultures, needs, and habits. If it was so, we could not then explain the variations in the aesthetic response of a specific society or individual. Because there are certain factors external to the individual that determine aesthetic response, we can argue that there is more than one way to interpret taste.

Accepting that taste is an attitude created through social, economic, political and other factors external to design, we place it in a social background. According to Bourdieu, taste "functions as a sort of social orientation, a 'sense of one's place', guiding the occupants of a given place in social space towards the social positions adjusted to their properties and towards the practices or goods which befit the occupants of that position. It implies a practical anticipation of what the social meaning and value of

the chosen practice or thing will probably be, given their distribution in social space and the practical knowledge the other agents have of the correspondence between goods and groups" (10). Bourdieu's approach as analysed in *Distinction* is questioned by other scholars like Daniel Miller (11), who finds this particular work an 'ahistorical representation', a balance between objectivist approaches such as those found in archaeology and subjectivist approaches such as design history. According to Miller, "the sociological criterion used by Bourdieu tends to be either occupation or educational level, but both are related to the common conception of social class. Taste is then seen principally as the cause of 'classism'... and the source for the basic difference in taste is traced by Bourdieu to the different experiences of these classes in modern society" (12). Miller criticises Bourdieu for accepting only one perspective upon mass consumption by locating objects in relation to interest and power while ignoring other aspects of culture. Moreover, Miller believes that in Bourdieu's work the problems of alienation and estrangement are reduced to problems of access to knowledge. Projects based on religion, morals, the nature of the self and so forth cannot be fully incorporated within this framework (13).

In this study, taste is accepted to be created by numerous means in society. On a local scale, in present and past societies, these means are : availability in the market, technology, the influence of individuals within the group, relation to wealth, relation to ideals and social status. Availability in the market partly determines demand, because the public usually accepts what it is offered and tends to associate the things supplied with those that it should consume. Once an object has been in the market for some time it becomes easily recognisable and often desirable, however if only at the same time it manages to be associated with material, but mainly conceptual needs of the specific society. Taste often seems to be related to things that are rare or valuable and thus desirable, or are signs of wealth; because beauty and wealth are sometimes regarded as the same. In the present era, mass media, design propaganda, and exhibitions could be added (14). Klapper states that the media do not seem to determine tastes, but reflect



tastes otherwise determined i.e. by one's primary, secondary and reference groups as well as special personality needs (15).

Availability, the value of objects, individuals' influence, social status of groups and economic forces tend to change from time to time, so tastes change. Taste seems to be a social mechanism defining sub-cultural boundaries (16); and the members of a social group use this mechanism to identify others and establish a relationship with those who share their preferences (17). It is a signal, expressing a view as well as a way of life. 'Taste cultures' are described by George Lewis as groups of similar people making similar choices and things of similar content chosen by the same people (18). He explains that these taste cultures consist of values and choices of cultural content that reflect these values (19). Thus, while it is reasonable to refer to personal taste, or a group's taste, its association with human nature has no absolute value. Therefore, taste becomes a form of communication through stylistic choices (20). These choices are important to consumers because they imply not simply the selection of particular objects, but a way of life, and therefore a social position, either achieved or to which they aspire (21). Moreover, by purchasing, the consumer deciphers and decodes the social signals (22).

Thus, taste is a form of communication between people and objects. Meanings signified by forms are the result of a social process and are not merely subjective interpretations. Therefore, it is valid to investigate the relationship between meanings, concepts and design on a social basis and attempt to establish a model for general application.

### **1.3 Introduction to the Method of Investigation.**

#### **1.3.1 Model of Analysis.**

The above approach was augmented by the introduction of a description model



[table 1] that concerns manufactured products, and was used to investigate contemporary office furniture products. According to this, the material and abstract features of any product stem from an individual designer or producer, whose decisions are influenced by factors external to design. These factors, which are equally important are as follows:

#### **1.3.1.1 Functional Factors**

Functional factors included any aspect that has to do with the use of the product, i.e. its function, the characteristics of the users (e.g. strong-weak, young-old, men-women,), the mode of operation and the relevant ergonomic and anthropometric data, the possible environment or mechanical system whose part it will be, the relationship between this and other things that will participate in the same process, as well as adaptability to existing or future systems, life-time of the product and possible repair facilities, proposed or available.

#### **1.3.1.2 Technological Factors**

Technological factors included any aspect in the manufacture of the product, such as the method of production (e.g. machine-made, hand-made, computer-controlled production,), the material that the product will be made of, and the technical knowledge of the user. Technological factors become decisive for the final result. The method of production determines shape and size (e.g. the production of the Thonet bentwood furniture became possible with the development of the steam bending method and the forming of the steel Bauhaus furniture was determined by the machinery available). Additionally, the properties of materials determine production methods, structure and finish. Even in the most sophisticated production, technical knowledge and skill determine the final result.

#### **1.3.1.3 Social Factors**

Human needs influence the demand for certain products, services or concepts and consequently the value of those that could satisfy them. Value is a relative factor because needs change from time to time, or from place to place. For example, degrees of poverty and wealth differ in different societies or at different times within the same society. Society imposes its own imperatives on consumption, based on real or imaginary needs in order to balance the various forces within its system. These imperatives influence the market, irrespective of the individual's needs. Connotations drawn from symbols play an important role because they influence a product's value. Mass media are a major influence on consumers' demands and therefore on design.

#### **1.3.1.4 Cultural Factors**

Culture, history and religion create symbols, and influence people's reactions towards concepts and consequently products. These factors influence the way one perceives and interprets information from one's environment. Additionally, temporal tendencies such as fashion, group habits, connections with concepts or events, and knowledge of a subject can favour specific forms, colours and styles.

#### **1.3.1.5 Economic, Political and Legislative Factors**

The stage of economic development is closely related to production because the economy affects consumer demands, as well as the stage of industrial and technological development. Within a free market economy, competition, besides encouraging stylistic manipulations, creates a positive environment for design, technology, ergonomics, consumer safety and health protection. All the above can directly influence the final form of the product. Politics and the system of government play an important role in export policy, trade and industrial development. State legislation can be added to the above, and also company legislation. The latter guides the decision makers within a company who

classify the various factors that participate in the production i.e. design, technology, cost, target group. Usually, democratic regimes adopt a free market economy, while totalitarian regimes usually eliminate any connections with other countries and consequently obstruct the import and export of goods.

Designers are influenced by some of the above factors, making decisions that influence the form of the product and its aesthetic. We could also formulate a converse hypothesis: that through the form of a product one can detect and identify the designer's priorities and the external influences.



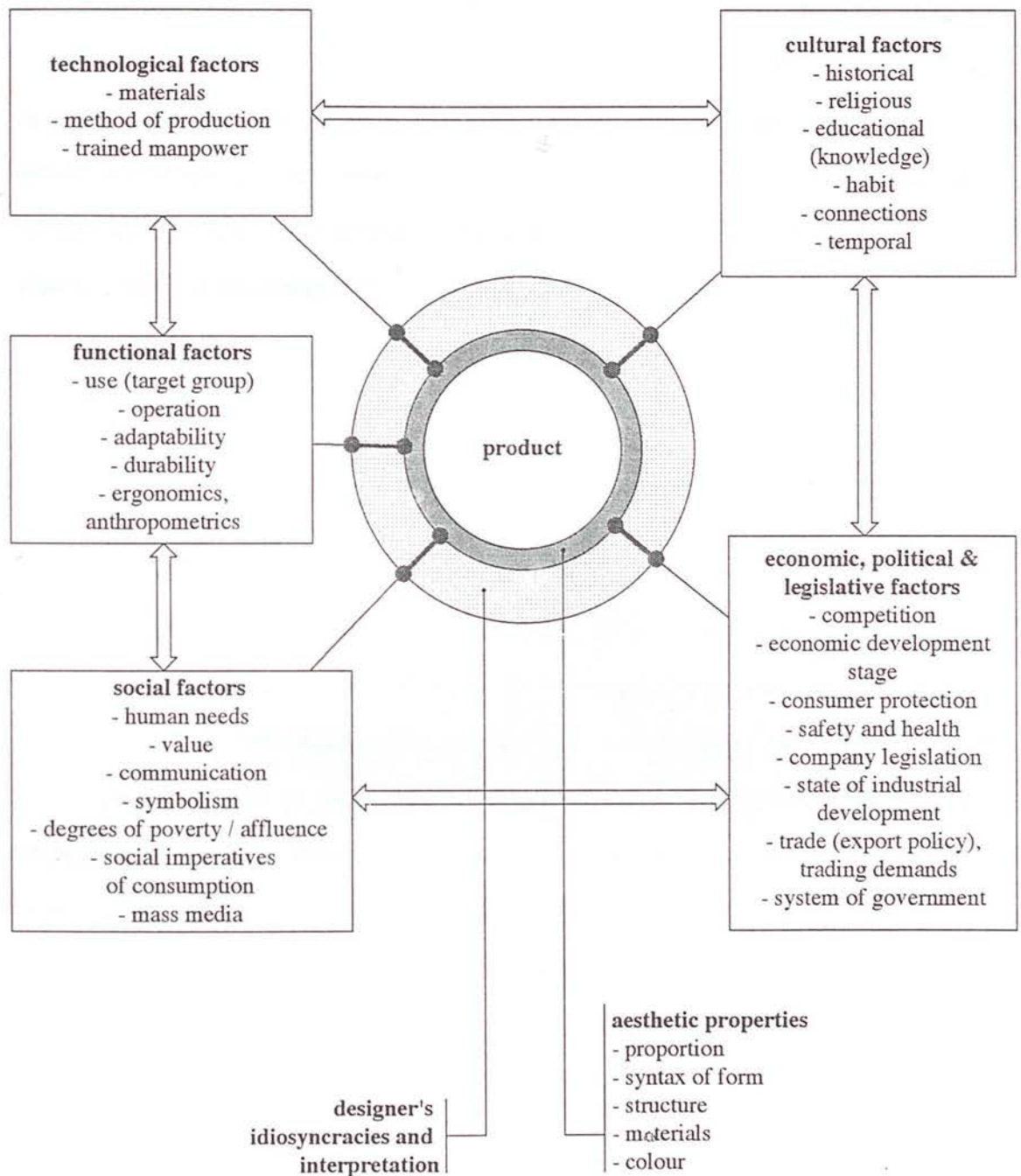


Table 1. Description model of the factors influencing the form of a product

### 1.3.2 Methodology.

The author regards design as an active factor within society and as an expressive means of the tendencies of any given socioeconomic, political, cultural and technological system. General issues developed in the sections 1.1 and 1.2 introduce a descriptive model which includes all the possible factors that coexist when a product is created. Therefore, the form of a product, its design or style, besides having the individual characteristics of the designer, is closely related to its context.

Particular reference to a specific subject was regarded as necessary in order to deal with concrete facts. The chosen subject acted as the application of the theoretical model to a specific design area, time and place. The subject chosen was the office furniture design in the 80s within the context of the European Community. Office furniture design was chosen because it is adequately developed in most of the European countries, even in the less industrialised ones, so one can easily find a sample for the purpose of comparison. The '80s was chosen because it is recent past, which means that material for the investigation was more likely to have been kept and therefore to be found in the production units themselves as well as in libraries and archives. It was also found interesting to deal with the very recent past as a historical period and set the basis for the investigation of design trends in the near future. Finally, Europe was chosen because it is the source and the consumer of most of the different tendencies that characterize the decade and because of a personal interest of the author.

The study aimed to relate the form of office furniture products to the context that produced them, i.e. the European Community of the '80s. A historical and social approach of the evolution of the office (cf 1.4.) acts as introduction to the subject and the method of approach, i.e. the relation between form and sociocultural, economic and other external-to-design factors. Following the model of analysis, the author examined first of all the general context of the particular period and place - social, political, legislative facts,

technological developments and cultural tendencies that characterised the European Community in the '80s- in order to create the background in relation to the form of products which would be investigated (cf ch. 2).

The European Community is not a pure sample, composed at that time of twelve countries consisting in many cases of regions quite different to each other (e.g. Spain). However, an interesting part of the study was to examine the various systems and the influence they had on the production a country's office furniture products. Five of the twelve countries were chosen to provide the sample for the study: Germany, Greece, Italy, Spain and the United Kingdom. The reason for the choice is the following: Germany and Italy, traditionally industrial countries, dominated on the scene of the particular international production but with different attitudes, while the United Kingdom, though also an industrial country by tradition, met certain difficulties in presenting its production to the international market. On the other hand, Spain and Greece, though similar in terms of geographical position and climate as well as in their economic and political past and present systems, demonstrated different reactions to similar opportunities (e.g. democratic government, participation and economic aid from the EC).

The collection of data to support the argument used two channels of information, one direct and one indirect. The second was information from already recorded knowledge - articles in magazines, books etc.- and the first was information from those, who deal with office furniture, i.e. office furniture producers and users. Thus, it was possible to make a two-way investigation of the market: from the producers' and the consumers' point of view that aims to discuss the influences between design and society. On the users' part, a specific sample was seen as necessary to specify of the demands of the working environment. The banking environment was chosen because its interiors are usually systematically designed in a less subjective way than other offices. Individuals in the design departments of banks were asked to comment on design matters concerning their working environment.



Trade directories, Elemond Periodici srl, the Design Council and the Barcelona Design Centre were the sources for the sample. From the 340 firms asked (100 in Germany, 100 in Italy, 100 in the United Kingdom, 20 in Spain and 20 in Greece) 60 replied (18%), a satisfactory percentage to support the study.

The Europa World Yearbook 1990 and particularly that part of the directory concerning banks was the source for the banks used in the sample (35 from Germany, 35 from Italy, 33 from Spain, 13 from Greece, 14 from United Kingdom). 35 of the above replied to the survey, (28%).

Although personal face-to-face interviews could have provided more information, they were unachievable because of time and cost, if one were to maintain the number of the participants in the survey. The latter was seriously taken into account in order to cover different systems and views. Furthermore, questionnaires seeking YES/NO answers or the multiple choice method gave a more objective outcome, a quality sought after in the study in order to limit the ambiguities.

The formulation of the questionnaires was based on the main issues of the study, aiming on the one hand to service the proposed model, and on the other to support the core of the study, i.e. the interrelation between design and its material and conceptual contexts, and the possible structure of this relationship.

The first questionnaire addressed to office furniture manufacturers attempted to identify design and purchasing policies of the companies, external determinants to production, the role of design and designers, as well as associations of form with concepts. Questions 2 and 3 aimed to identify the trade policy of the company. They were intended to provide evidence on the economic - political - legislative group of factors. Answers to Questions 4 and 6 were used as evidence of the cultural factors. Question 5,

through its many branches, helped to shape the economic, political and legislative factors as well as the technological ones. Questions 7,8,9, dealt with consumption, marketing and media problems concerning economic and social tendencies. In part B of the same questionnaire, Questions 10, 11, 12 investigated the designers' motives, conditions of work, aiming to identify their role as the mediator between society and product. Parts C and D required a more cerebral response. Questions 13 and 14 investigated the relationship between concepts and products from the manufacturers' point of view, identifying the ways the latter interprets demands and tendencies in society. The way they reacted to these tendencies was examined in Questions 15 and 16. Question 16 also provided information on the influence of technological, economic and social factors on design. Consumer behaviour is discussed in Questions 17 and 18. Competition, an important factor from the group dealing with economy, was investigated through Question 19, where also values in the contemporary market system became evident.

The second questionnaire concentrated on the one hand on the recording of the characteristics of bank interiors and on the other on the relationship between the office environment and the products that comprise it and their meanings. The respondents were individuals in the design departments of banks who spoke on behalf of their institutions. Question 2 identified designers of the institution and Question 3, 5 and 6 define the design policy of the institution. Question 6 sought a response on design and sociocultural values. Additionally, Question 4 investigated the bank's attitude to design. Questions 7 to 12, 17 and 18 investigated the meanings of form within the working environment in banks. Question 13 dealt with the new functional and structural requirements of the office due to the use of technology. Questions 14 and 16 investigated competition in the office furniture field and the values in the particular market system. A legislative factor concerning the bank's policy on furniture was the subject of the 15th question and an aesthetic one was the subject of the 19th.

Functional and structural aspects of the modern office and of the banking environment complement the reference to the social, economic, cultural, political and



technological characteristics. Additionally, the above mentioned characteristics in relation to the office furniture design of the '80s within the European Community were discussed by those who form and develop the tendencies in the field (cf. ch. 3).

Two major difficulties were encountered in the survey. The first was the communication problem in terms of language between the author and five linguistically different groups of subjects. The second was the lack of visual or tactile content in the questionnaires. The communication problem was overcome to a great extent by the use of questionnaires in all the five languages, translated either by the author (Greek) or by persons being native speakers of the other languages (German, Italian, Spanish) in close cooperation with the author so that terms were kept as similar as possible; however, very often the communication problem extended beyond the limits of language, entering the sphere of linguistics, particularly when words with abstract meaning were used. Definition of the terms used in the questionnaires was not a solution because this complication would discourage many to reply. Instead, the terms used were simplified, as in everyday speech. On the other hand, an approach based to some extent on feelings is not regarded as a disadvantage; on the contrary, the relation of concepts to materials presupposes an approach of this kind.

Coates (23) sees feelings as the raw material for semantics, a theory of meaning that associates forms and concepts (cf ch. 3). Semantics is a part of the semiotic theory, and deals in design with the significance and content of designed objects. The formulation of the questions on this issue (eg. Questions 9, 10, 12, 14) and their analysis adopted the "semantic differential" method suggested by Coates as the most reliable and easily implemented tool for identifying meanings associated with products. According to this method, anything can be described with pairs of antonyms placed at opposite ends of a scale. The respondents mark the scale appropriately. The Apple Macintosh software MS EXCEL 3.0 was used in the implementation and analysis of the survey.



The result of this particular recording of the working environment can be compared with a) propositions of the respondents on the ideal working environment (eg. Question 8) and b) associations between forms and concepts that respondents are asked to make. The associations, asked for at the end of the Questions 9, 11, 12, and 19, refer to the general attitude of the respondent rather than to each particular conceptual subject of the ones mentioned in the first part of the question, although the latter would give subtler results. The reason for this lies in the practical difficulties met by respondents to answer the 14th question of the 1st questionnaire<sup>2</sup>, which should have been approached by the respondents through a more analytical method. In other words, respondents seemed to find this general approach easier to deal with, rather than the diagrammatic form defined by concepts and means lined up in one vertical and one horizontal axis, that needed to be related to each other.

Furthermore, the above-mentioned axis method was used to examine associations between limited concepts and materials in the 18th question of the second questionnaire. The intention was on the one hand to check whether the big number of elements used in the 14th question of the 1st questionnaire was a factor with serious negative consequences and on the other hand to receive as much specific information as possible on the particular issue, even from fewer respondents, as it is of major importance to the study.

A similar problem was met due to the limitation with verbal communication, especially in questions on colours, shapes, textures and so on. With colours, the method adopted to ensure greater accuracy was the use of the three parameters: hue, value and chroma (24). Thus, a parathesis of seven hues plus white and black was complemented by a distinction between bright - pastel and dark - light ranges of each hue that correspond to the "value" and "chroma" gradations in a simplified way, using words of everyday language. Textures and finishes were distinguished by antithetical characteristics with perceivable meaning.

---

<sup>2</sup>the feed back of the 1st questionnaire was received some time before the second one was sent out

The semantic interpretation of the design of the office in relation to the data of the survey and the complete model based on the consideration of the background, as developed in Chapter Two, provided the elements for an overview of office furniture design in the 1980s in the context of the European Community (cf ch. 5).

#### **1.4 A Historical and Social Approach of the Development of the Office.**

Definitions of the office refer mainly to its function, i.e. directing and co-ordinating the activities of an enterprise (25), rather than to space, because these activities can be held almost anywhere and an office can be located wherever an adequate substructure can be provided.

The design of office interiors, furniture and equipment constitutes a typical example of the relationship between form and factors external to design, such as functional requirements, social conditions, cultural attitudes, economic and legislative situations, as well as technological development. In the following, the development of the office and its design in relation to the above-mentioned factors is discussed .

The library, or the study in one's home, that hosted the office before the Industrial Revolution, became inappropriate when the scale and the complexity of operations increased and inventions such as the telegraph, telephone and typewriter were introduced (26). Mechanization led to a separation of operative tasks from intellectual ones, distinguishing clerical from managerial operations. The operation of the typewriter allowed women to enter the office as typists late in the 19th century. Typewriting was considered an inferior task because of its lack of creativity, and as such suitable for women, according to the view of the society of that time (27). Women in the office, division of labour similar to this in the factories, and more people working in services were the main reasons for the deteriorating status of the clerks.



The development of the office desk in the late 19th and early 20th centuries is a signification of the deteriorating status of the clerk, who used to be socially nearer to the middle class, but was steadily moving towards the working class (28). The traditional desk of the 18th century with high back and pigeon holes, roll top and pedestal bases, with drawers down to floor level [fig. 1] was replaced by a completely new piece of furniture that aimed to satisfy the demands of the time. The high back with the roll top and the pigeon holes disappeared and with this the privacy and the independence of the clerk (29). A flat top remained as the only working area for an employee, which was easy to check, while drawers tended to be reduced in number and size [fig. 2]. Scientific management processes<sup>3</sup>, and the division of labour they entailed, made filing a separate activity, resulting in the loss of filing space (31). The outcome of scientific management methods was the transformation of clerical workers from craftsmen - in the sense that they had the responsibility for the whole of a transaction - into simple workers who did repetitive tasks and who were not allowed to obstruct the flow of papers through the office by keeping them in drawers. Straight lines, plain surfaces, and diminishing volume reflected the tendency of the time, favouring a healthier environment with more air and light. Furthermore, they signified the loss of clerical status (32).

Mechanization created the need for more space per employee and furniture designed especially for the usage of technical devices. The most common of these purpose-designed items was the typist's desk, which appeared in the 1880s, but was redesigned in the 1910s with an adjustable height for the typewriter, devices to hold the paper, and drawers to house typing accessories [fig. 3] (33). The design looked like a worker's bench more than a piece of furniture. This was the object of the scientific management approach. The same approach was adopted for the design of most of the office machines, such as adding machines and typewriters, which had less surface decoration than the earlier models. Everything in the clerk's space was industrial in appearance, especially

---

<sup>3</sup>Scientific management has its roots in Frederick Taylor's studies on factory work. He assumed that there was an optimum method for each job in order to achieve maximum efficiency. Division into stages and directed effort were some of his points that became known in the 1900s.(30)



after the widespread use of steel for office furniture. Perhaps it was intended to associate the office with the factory (34).

One of the social conditions that sustained the above approach was the bad economic situation between the wars that led to reduction in employment, cut in wages, and neglect of the appearance of the office both for employers and employees (35). The interesting part here is the widening of the gap between employers and employees and its reflection upon the form of equipment they used. Executive office furniture was clearly distinguished from that of the clerks in terms of size, capacity and appearance. Domesticity and expression of status were their main features. Decoration, upholstery, comfort and privacy, cabinets and cases concealing all the mechanical devices, distinguished the executive's room from the rest of the office.

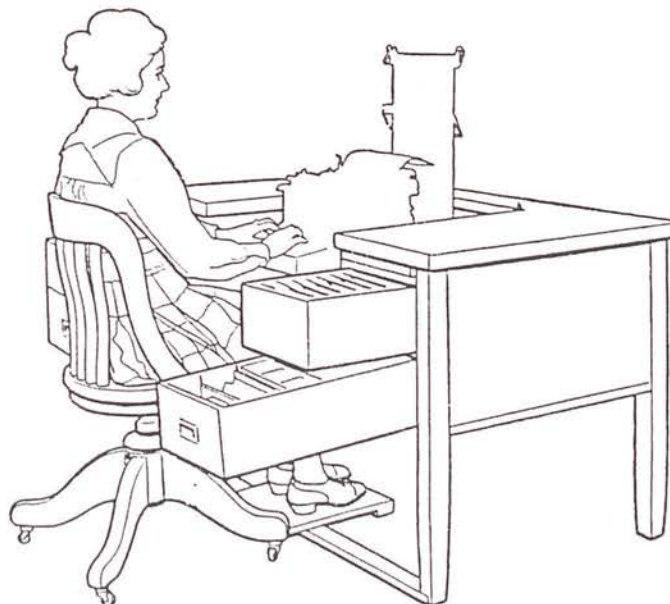
This changed after the second world war. In the 1950s and 1960s, the increasing demand for workers in the services sector and the competition with factory jobs which paid higher wages, caused major changes in the office (36). Almost all the equipment in the office was redesigned according to the tastes of the time and office furniture became more attractive and comfortable. Thus, comfort and respect for the nature of work became the competitive means for attracting employees (37). The rectilinear grids of desks was replaced by changes in the layout of the office, called *office landscaping* (*Bürolandschaft*), developed in Germany (38). The layout was determined by work flows making hierarchies indistinguishable. This egalitarian approach was applied to the form of office furniture, diminishing the differences between executive and clerk. Technological development, especially air conditioning of large spaces, with many people working there for long hours, made this layout feasible.



**Fig. 1.** Traditional desk of the 18th century with high back and pigeon holes, roll top and pedestal bases, with drawers down to floor level.



**Fig. 2.** A flat top remained in the late 19th and early 20th centuries as the only working area for an employee, which was easy to check, while drawers tended to be reduced in number and size.



**Fig. 3.** The typist's desk appeared in the 1880s, but it was redesigned in the 1910s with an adjustable height for the typewriter, devices to hold the paper, and drawers to house typing accessories.

Openness, friendliness, domesticity and equality characterised the new face of the office (39). While uniformity was apparent, a few elements were developed to protect office hierarchies. One of the distinguishing features between senior management and the rest of the staff was the degree of individuality through personal objects. Size, privacy and storage space also distinguished hierarchies (40). Partitions and screen-mounted furniture in the 1960s broke up the openness of the landscaped office in order to protect hierarchies, to provide more surfaces for storage and create areas for private or special tasks (41). Another type of high-backed desk was introduced, requiring more space per individual, than previously, due to the introduction of computers into the office.

Other office equipment followed the same rationale, redesigned to meet the demands of the new office. Steel or plastic cases that concealed mechanisms, curved and pastel-coloured rather than the metallic finishes of the pre-war years, brought elegance to the environment. The introduction of the electric typewriter in the 1950s stimulated more innovative design. Bright or pastel colours, subdued lighting, well-designed equipment and plastic furniture, expressing informality and comfort, characterised the office before the 1970s, an attempt to reconcile technology and people (42). This approach, together with computer hardware design, facilitated the introduction of the computer.

### **1.5 Functional and Structural Aspects of the Contemporary Office.**

Real estate and building technology, together with increase of employment in services, office technology and office organisation shape the modern office. Air conditioning made possible the use of large spaces. The separation of the building structure from the interior arrangement offered new possibilities for flexibility. Changes in the European Economic Community and society, such as rapid technological development, high levels of unemployment, the introduction of computers into the office, a new political framework, and the subsequent cultural changes played an important role



in the development of the office and the production of office equipment. Since the 1970s, office organization has been dependent on the flow of electronic information. Computers dominate offices and facilitate the development of small businesses, as more work can be done with fewer employees.

Office automation also changed offices location; the city centre location is no longer a necessity for access to information. Thus, employers could avoid high cost rental sites. Computers and other products such as fax and telex machines, photocopiers and printers resulted in an increase in the amount of space per person. As technology develops, electronic equipment tends to change quite often and therefore surfaces to accommodate the equipment are preferable to built-in units. More electronic equipment is used in the office but it has become smaller. Often the equipment is shared between a number of employees, demanding a special arrangement of the working space. Flexibility and adaptability of the environment have become major factors in architectural, interior and industrial design related to the office.

Electronic equipment, air conditioning plant, heating and ventilation equipment, vertical and horizontal cabling, and pipe lines constitute the nervous system of office buildings, inseparable from their structure. Cladding covers the technological infrastructure to make the office habitable. Raised floors, suspended ceilings, fabric-covered panels and fittings conceal the mechanisms of the office building. The materials used vary in durability and finish and most of them must conform to strict standards related to fire, humidity and static electricity.

## REFERENCES

- (1) Penny Sparke, *Design in Context*, (London: Bloomsbury Publishing Ltd, 1987), introduction.
- (2) Adrian Forty, *Objects of Desire; Design and Society 1750 - 1980*, (London, Thames & Hudson Ltd, 1986), p. 8.
- (3) Alfred G. Smith, *Communication and Culture*, (New York - London: Holt Rinehart and Winston, 1966), p. 7.
- (4) Tomas Maldonado, Unesco Seminar Report on the Education of Industrial Designers, (Bruges: March 1964), p.14.
- (5) Marjo Wiberg, In search of Meaning in *Form Function Finland*, pt 2 1987, p.8.
- (6) Stanley Moody, *National Characteristics and Industrial Design*, author's translation from published references: 1.Národní Vlastnosti, v průmyslovém vytrácnictví, Trav. no 1, Vol. XXI (1970), pp 1-4 (in Czech). 2. Cechy narodowe we wzornictwie, Wiadomosci instytutu wzornictwa przemyslowego, no 6-7 (1972), pp 1-26 (in Polish).
- (7) Kenji Ekuan, *The Landscape of Design creation*, First International Design Forum, (Singapore, Oct. 1988), p. 7.
- (8) *ibid*, p. 10.
- (9) Penny Sparke, *Design and Culture*, (London, Allen and Unwin, 1986), p. 207
- (10) Pierre Bourdieu, *Distinction. A Social Critique of the Judgement of Taste*, (London: Routledge and Kegan Paul, 1985), p.466.
- (11) Daniel Miller, *Material Culture and Mass Consumption*, (Oxford, New York: Basil Blackwell Ltd, 1987), p. 155-157.
- (12) *ibid*, p. 150.
- (13) *ibid*, p. 156.
- (14) Penny Sparke, *Design and Culture*, p. 108.

- (15) Joseph T. Klapper, What we Know about the Effects of Mass Communication, in *Communication and Culture*, p.546.
- (16) Beryl Mc Alhonne, Special Issue on Taste, in *Designer*, (January 1983), p.3.
- (17) *ibid*, p.3.
- (18) George Lewis, Taste Cultures and their Composition : Towards a New Theoretical Perspective, in *Mass Media and Social Change*, ed by Elihu Katz and Tamas Szecscö, (ISA 1981) p. 205 (reference to Gans 1967).
- (19) *ibid*, p. 205.
- (20) Penny Sparke, *Design and Culture*, p.109.
- (21) *ibid*, p.112.
- (22) Pierre Bourdieu, *op.cit.*, p. 2 introduction.
- (23) Del Coates, Measuring Product Semantics with a Computer, in *Innovation*, Vol. 7, (1988) pp 7-10.
- (24) William Charles Libby, *Colour and the structural sense*, (London, Prentice Hall Inc., 1974) p.8.
- (25) Alan Delgado, *The Enormous File; a Social History of the Office*. (John Murray, 1974), p.11.
- (26) *ibid*, p. 12.
- (27) Adrian Forty, *op. cit.*, p. 121.
- (28) *ibid*, p. 121
- (29) *ibid*, p. 124-5.
- (30) *ibid*, p. 123
- (31) *ibid*, p. 125
- (32) *ibid*, p. 127
- (33) *ibid*, p. 131
- (34) *ibid*, p.132
- (35) *ibid*, p. 133
- (36) *ibid*, p. 140
- (37) *ibid*, p. 141



- (38)        *ibid*, p. 143
- (39)        *ibid*, p. 143
- (40)        *ibid*, p. 148
- (41)        *ibid*, p. 150
- (42)        *ibid*, p. 152

## **2 . THE SOCIO-ECONOMIC AND CULTURAL CONTEXT OF CONTEMPORARY EUROPEAN DESIGN.**

### **A Survey of the Socioeconomic and Cultural Tendencies and Technological Developments in the Western World During the 1970s and 1980s with Particular Reference to the European Economic Community.**

Chapter Two is a survey of the socioeconomic and political context of contemporary industrial design. Its purpose is to establish the relationship between design and its spatial and temporal context.

In this chapter it is argued that since the early 1970s various factors in national economies, social formations, social needs and technological progress, differentiated the socioeconomic structure in western Europe. The long post-war economic boom ended in the mid-1970s, together with the loss of certainty and optimism that characterised that period, followed by a period of general instability that altered the market economy framework. The role of the state in financial affairs, employment levels, productivity-growth, and production policies are among those things that changed. A shift towards employment in services, fewer jobs in manufacturing industry, and the emergence of information technology, defined the new era. These developments occurred mainly in the EEC, though they affected western societies generally.

The meanings of the terms 'Post-industrial Society', 'Information Society' and 'Post-Modernity' are discussed in this chapter. Reference is made to the debates about them and to the ideologies they represent. The new socioeconomic and political framework introduced various new features into the culture. Confusion and uncertainty led to a strong move to aesthetic matters, short-time planning, ephemeral products, and flexibility in production techniques and consumption modes. Fiction, and fantasy, dominate in art works, literature, as well as in spatial arrangements in reality and in the cinema. Image became a feature of contemporary culture; authorities, corporations,

political and intellectual leaders, and individuals sought identity to counter ephemerality and fragmentation in social outlook. 'Life-style' in the 1980s became a new social category with a direct influence on consumer behaviour. Design played an important role relating products to life-styles.

This was the context of contemporary industrial design and production. Special attention is paid to the specific situation of the five countries investigated in the case studies. (Questions 2, 3, 5, 7, 8, 9, 13, 15, 18, of the first questionnaire and 2, 4, 14, 16 of the second questionnaire provide evidence relevant to this chapter.)

## **2.1 The Beginning of a New Era. The 1970s and the 1980s compared with the previous post-war years and the main reasons for the shifts in western societies.**

The 1970s and 1980s saw various remarkable changes in the economies, social formations and social needs which, together with rapid technological development, differentiated them from the previous post-war years (1).

In the early years after the Second World War, recovery was necessary in all the nations that had participated. National economies eagerly turned to production in order to satisfy the peacetime demands. Between 1945 and 1968, rapid economic growth was initiated and the rapid development of technology stimulated and supported industrial manufacturing and trading (2). The long post-war economic boom, which lasted until the oil crisis of 1973, provided the western world with unprecedented affluence (3).

In the aftermath of the Second World War, most European nations realised that western Europe was no longer the centre of world power. Out of this context emerged the idea of a 'united' Europe that would aim to combine the resources of the western European countries to sustain prosperity. The idea gained ground and was taken up by



Belgium, West Germany, France, Italy, Luxemburg and the Netherlands in the mid-50s. In 1973, Denmark, Ireland and the U.K. joined the European Economic Community (4). In the early 1980s the EEC was further enlarged to twelve with the membership of Greece, Portugal and Spain. Through economic co-operation, western European countries overcame the conflicts that had dominated the continent during the last century and the first half of the present one, and established a system which enabled them to benefit from each other under common regulations. This was a remarkable achievement because each of these countries still maintains its distinctive values, priorities and ways of life. Moreover, western Europe in the post war period sought to get rid of the xenophobic tendencies that had characterised its past and to consolidate the coexistence of the nation state with the idea of Europe. The first years of the Community's life were very promising. All West European countries experienced economic growth, though the extent to which this occurred was not the same for all (5).

During 1968-72 the first problems within the system appeared, which prepared the developed societies for the significant changes that would follow (6). Problems with labour markets and labour contracts led to strikes, production problems restricted expansion, and state monetary policy common to most of the European countries led to inflation that would eventually halt the economic growth of the post-war period (7). However, the momentum of this growth, in spite of those discouraging signs, was maintained until 1973 (8).

1973 was the year of the great recession; attempts to stop rising inflation weakened to a great extent the financial institutions and caused a world wide crash in property markets. In addition to this, an external problem penetrated the already fragile system. The economic crisis was exacerbated by a sharp increase in oil prices. OPEC decided to raise oil prices and the Arabs embargoed oil exports to the West during the 1973 Arab-Israeli war (9). This had a direct negative effect on the western economies, dramatically increasing the cost of energy. As a consequence, the energy problem prompted various

technological and organisational changes and led to a desperate search for ways of saving energy in industry.

During the 1970s and the 1980s, Western Europe participated actively in all the fundamental shifts of the western world, which correspondingly affected the relatively new system of the E.E.C. Thus, the system, which had just started to work for the benefit of its members, was weakened by external factors. For the Community, survival then became difficult because it had to solve internal problems concerning European integration, as well as for those concerning the international crisis (10).

The oil crisis and the quadrupling of oil prices by OPEC seriously affected the European economy because Europe depended mainly on imported oil. Any internal plans for the development of the production of European energy had been abandoned because in the early post-war years imported oil was cheap and readily available to the European manufacturing industries. As a result of the oil crisis, each country was searching for alternative sources of indigenous energy with a view to preserving them for national use, in parallel with an EEC structuring of the market in the light of European resources and a revised (downward) estimate of the demand for energy (11).

The economic problems caused by the oil crisis and the decline in jobs in industry and agriculture seriously affected inflation and unemployment, which was already a problem (12). The certainty and optimism that characterised the 1950s and the 1960s were seriously damaged by the pressures of the recent problems. The rate of expansion slowed down and stability was difficult to achieve as inflation and unemployment rates were increasing.



## **2.2 Major Changes and Social Characteristics since the Early 1970s.**

### **2.2.1 Flexibility.**

General instability, rising inflation and unemployment altered the market economy framework. Various attempts to survive lead to a general flexibility and mobility which characterised all aspects of life from the early 1970s onwards, with respect to labour markets, products and patterns of consumption (13).

### **2.2.2 Flexible employment.**

Market volatility, intense competition, narrowing profit margins, and the weakening of trades unions, facilitated a trend towards flexible work regimes and labour contracts in labour markets. This flexible employment was sought by employers in this period of uncertainty in order to employ workers when they were needed and to suspend them when they were not. It proved to be beneficial for some employees, e.g. mothers, students. However, in general terms, this tendency was harmful for the working population as a whole (14). It resulted in part-time, temporary, or sub-contracted work arrangements (15). This pattern was adopted by the services sector, supported by the development of computer technology, that reduced the number of personnel required and made working from home possible.

### **2.2.3 The role of state.**

Whatever the ideology of the government in power, state-intervention in the European countries became more crucial than before (16). The state intervened in financial flows and markets, as well as controls on labour (17). Because of international competition, the state was forced to become more entrepreneurial. During the last two decades, the state was called upon to regulate the activities of corporate capital in the



national interest, to create a strong business climate, to attract transnational and global finance capital and to deter (by means other than exchange controls) capital flight to more profitable markets (18).

#### **2.2.4 Financial systems.**

Within this framework, a tendency towards autonomy of banking and personal financing emerged. The concentration of power in financial institutions, accompanied by new financial instruments and markets, and the rise of highly sophisticated systems of financial coordination on a global scale supported geographical and temporal flexibility of capital accumulation (19). The role of the bank changed as well as the relationship between bank and customers. More commercial and more flexible than before, banks became 'money-shops' (20).

#### **2.2.5 Small businesses.**

Another characteristic of the era from the early 1970s onwards, deriving partly from sub-contracting, is the formation of small businesses, reviving older domestic, artisanal modes of production (21). The mass production of the 1950s and 1960s (except by the multinational companies) has been countered by the batch production of small businesses (22). Furthermore, many of the traditional, standardised, mass production businesses failed to cope with the new techniques of a flexible system of production, and consequently faced bankruptcy, or restructuring (23).

#### **2.2.6 Innovation.**

Within this flexible production system, product innovation became crucial to commercial survival (24). Though there were many innovations during this period, most of them were minor changes to existing products, restyling exercises, and trivial improvements. The reason behind this is probably because they were 'market pulled'.<sup>1</sup>

In this market-led innovation, the role of the designer, especially in products and graphics, has changed. 'Design' became a key-word, used mainly as a noun referring to the appearance of a product. Professional advice on design matters became necessary and therefore designers' services were in increasing demand.

Generally innovations depend on context, being responses to needs or opportunities and on creative effort. If successful, they introduce new ideas and possibly induce further change. Some innovations affect people, causing changes, even unforeseen by the innovators themselves. This is risky, as innovations can create problems in social life or in the natural environment, which if not realised in time can be harmful. For example, the use of freon in the refrigerators is one of the factors that are responsible for the ozone problem, although this wasn't until recently realised. During recent years, the need for survival has led to some misuse of technological innovation, which harmed the natural environment, ignored pollution and the waste of raw materials. The use of non-recyclable plastics during the 1960s is an appropriate example.

### **2.2.7 'Green' issues.**

Wastage of materials and natural resources became a serious problem after the 1960s, as the number of products available to satisfy the consumer needs increased dramatically and as the life of some of the products fell in comparison to previous models. The acceleration of both production and consumption threatened the balance of nature.

---

<sup>1</sup>The term 'market pull' and its complementary 'technology push' refer correspondingly to the intention of innovators to discover 'what prospective customers need, or want and then develop an innovation to meet those demands', or the intention of innovators 'to create a new product, device, or system and then try to sell it'(25). Robin Roy, quoting Bennett and Cooper points out that major innovations, like the telephone, or the electric lighting, tend to be the result of 'technology push' rather than 'market pull', because on the one hand 'market cannot signal demand for really novel products and processes, and on the other 'as consumers and society often resist major innovations when they first appear, it is almost impossible for market researchers to distinguish between distrust of the new and a genuine lack of need or demand' (26).



'Green ' issues, favouring environment-friendly products and processes, became topical, especially during the 1980s when environmental problems became serious. Individuals, as well as state authorities, began to address the situation. The fragile environment showed signs of damage, e.g. the ozone hole, species threatened by extinction. Much of the campaigning dealt with theoretical issues rather than practical measures. Sometimes ecological ploys were used to create fashion modes, masking attempts to increase consumption. But as the problems increase, care for the environment will become the main issue of the future, and 'sustainability' the keyword in production operations.

#### **2.2.8 Turn-over time.**

Wasteage of materials, unprecedented during the post-war years, increased enormously with the reduced turn-over time of products i.e the planned life of products, especially during the period of intense competition after the 1973 recession. A product life of half, or even less, in comparison to previous years, characterised many products, from cars to textiles (27). General instability was accompanied by ephemeral products, quick changes in fashion and taste, and a celebration of difference for its own sake. Advertising strategies exploited this tendency and turned more and more from information content to psychological positioning to differentiate between similar products. For example, advertisements about office furniture products tend to project the desired life style of the possible users, rather than information about the materials, or the quality of the products.

#### **2.2.9 Information Technology - Knowledge.**

Access to, and control over information, coupled with a strong capacity for instant data analysis, have become essential to the centralised co-ordination of corporate interests (28). The capacity for instantaneous response to changes in exchange rates, fashions, tastes, and moves by competitors is more essential to corporate survival than ever



before(29).

Data on markets has become very important over the last twenty years and, together with the organisation of knowledge, enhances competitiveness (30). Information technology supported this tendency; increase in the speed of communication, flexibility and efficiency in the handling of information, and cheaper computers. A consequence was the rapid growth of business consultancies specialising in market trends and data analysis.

#### **2.2.10 Growth of the services sector.**

The increase of services such as consultancies did not occur in isolation. It was part of a general trend towards employment in services, a major characteristic of this period. For the first time in history, employment in services exceeded employment in industry in many of the developed countries. This increase of employment in the services was accompanied by a marked decrease in employment in agriculture and in manufacturing industry (31).

In the EEC since the early 1970s there has been a decline in traditional industries, such as textiles, coal and steel and, additionally, in the U.K.'s case, motor cars. In the 1970s, employment in service industries in EEC grew by some 18% compared with a fall of 33% in agriculture, and a fall of 12% in manufacturing industry (32). While employment in manufacturing fell, affluence didn't seem to follow the same trend, in spite of major difficulties in European economy.<sup>2</sup> A significant point that arises from the comparison of the dimensions of affluence and manufacturing is that while in the post war

---

<sup>2</sup>According to Jan-Erik Lane and Svante O. Errson (33) the comparison of those two socio-economic dimensions divide EEC countries into four clusters:

1. A high level of affluence and a low level of industrialisation distinguish Denmark.
2. A medium level of both affluence and industrialisation set Belgium, Netherlands, France and the U.K. apart.
3. A high level of both affluence and industrialisation characterise Germany.
4. A low level of both industrialisation and affluence is to be found in Italy, Spain, Portugal, Greece and Ireland.

years before the 1970s the relationship between affluence and manufacturing was strong, it was no longer the case afterwards. A possible explanation is that affluence used to depend on manufacturing, but not any more. The reduction in industrial employment and expansion in the services sector, implies that affluence is increasingly dependant on the services sector. The expansion and the status of the services sector resulted in an improvement in the working environment and its equipment, as well as more space to house services. Even though the services sector has dominated employment during the last two decades in most European countries, the economies of Europe still depend to some extent on their manufacturing industries (34).

The importance of information technology in society, as well as the growth of the services, persuaded contemporary thinkers such as Bell, that the western world is moving beyond 'industrial capitalism' towards a completely new social order called 'Post-industrial society', or 'Information society'. This gave rise to a debate and those - David Harvey among them - who believe that the recent tendencies are just the next phase of the market economy, prefer to call this phase "late", "consumer", or "multinational capitalism" (35).

Bell is the most frequently quoted and generally accepted as the originator of the 'post-industrial' idea. His argument supports the idea of a new phase of development within societies, which is as different from the industrial as that was from the pre-industrial. In essence, the argument is that as the agrarian was replaced by industrial society as the economic emphasis shifted from land to manufacture, the industrial society has been replaced by the post-industrial one as the economic emphasis has shifted from manufacture to services. Bell argues (36) that the transformation of the industrial society to the post-industrial one involves economic and social changes, such as the replacement of the production of goods by the production of services, the replacement of blue-collar workers by professional, scientific and technical groups, and the replacement of the older machine technology by data processing (e.g. computers). Bell forecasts the emergence of



a new social framework based on telecommunications, theoretical knowledge becoming the strategic resource of the post-industrial society, and institutions such as universities and research organisations becoming the 'axial structures' of the new society.

The emergence of the service economy is under question by some scholars. R. M. Hartwell stresses 'the structural change involving the continuous growth of the tertiary sector has occurred in both the United States and England from the beginning of their industrialisation' (37). The differential rate of expansion of manufacturing and services showed from the very beginning the trend that 'service employment was increasing much faster than manufacturing, but with decreasing productivity: a tendency that has continued up to the present time, so that a majority of the population is now employed in services' (38). Robert Heilbroner (39) says that the shift is not from industry to service employment, but from agriculture to services. This is supported by the fact that at any time and in every case except the U.K., the number of people employed in services and agriculture together was greater than the number working in manufacturing. The most significant change during the post-war period in the western countries was the rapid decline in agricultural employment and the rapid increase in employment in services. In the late 1960s, this pattern was accompanied by a slow decrease in employment in manufacturing. Finally 'information' (-processing, -storing and transmitting), as acknowledged by Geshuny and Miles, must be taken into account in contemporary socio-economic analysis, but it cannot be validly viewed as a 'separate' sector. All sectors have become more information intensive (40). Whatever the arguments, services are very important in contemporary society. Consequently, the office environment and its equipment, as an expression of social values, are of major significance.

Though affluence continued to characterize EEC countries in the 1970s and 1980s, its achievement was more difficult than during the economic boom of the 1950s and the 1960s (41). In most countries there was a brake on public social provision and a slowdown in the expansion of higher education that characterised the 1960s. Inflation, unemployment, a fiscal crisis in the public sector, and private sector problems caused



socio-economic instability in western Europe, which also affected political life. There were various national responses to this situation. In the U.K., Belgium and Spain, criticism of the political decision-making systems affected institutional autonomy, while a tendency to delegate political authority to local government appeared in France and W. Germany. Additionally, Greece, Portugal and Spain during the 1970s replaced authoritarian regimes with democratic government (42). Political instability added to the general pattern and volatility characterised the up-to-then stable political parties (43). However, the sources of political instability in western Europe were within the borders of individual countries, and the interstate relationships remained stable and unbroken, a tribute to the EEC.

To summarize, unemployment and a general tendency to flexibility favoured flexible employment in western Europe, while small businesses appeared in the European market, supported by information technology. Competition and flexibility induced innovation whilst high rates of production and consumption added to environmental problems. Green issues started to influence individual, industrial and state decisions and will probably be the key issue during the 1990s.

### **2.3 Contemporary Culture and Aesthetics.**

Culture, socio-economic forces, and political order are not separate entities but, as has been argued, parts of a framework characterizing historical periods. Therefore, contemporary culture and aesthetic works are part of the socio-economic order, part of the ongoing innovation and experimentation in the production of goods and services, and part of competitive market tendencies.

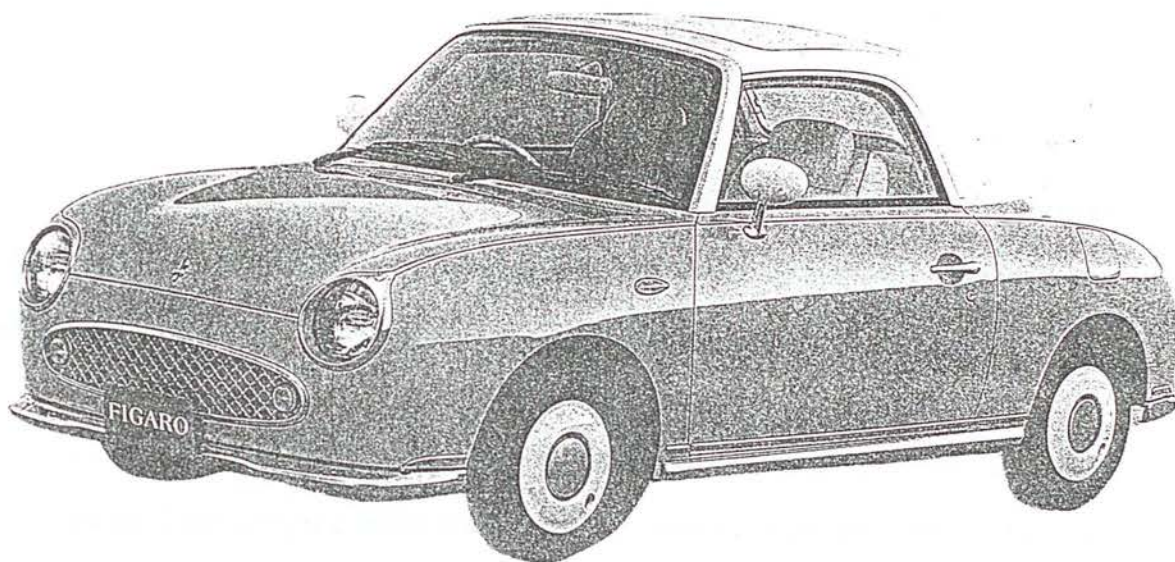
Confusion and uncertainty led to the search for spatial and temporal answers and consolation in aesthetics. However, this is not unprecedented; in the past, Rococo and Art Deco, for example, appeared under similar circumstances. It could be argued that the loss

of confidence in scientific and moral judgements, and in political and economic institutions is closely related to an acceptance of transience and a return to aesthetics. The first signs of this transience was the emergence of 'instant' and disposability in the 1960s. The serious breakdown of money as a secure means of representing value created the need for other values. Works of art, antiques and houses comprise the values of the new era and designed objects represent value and therefore endow status on the owner.

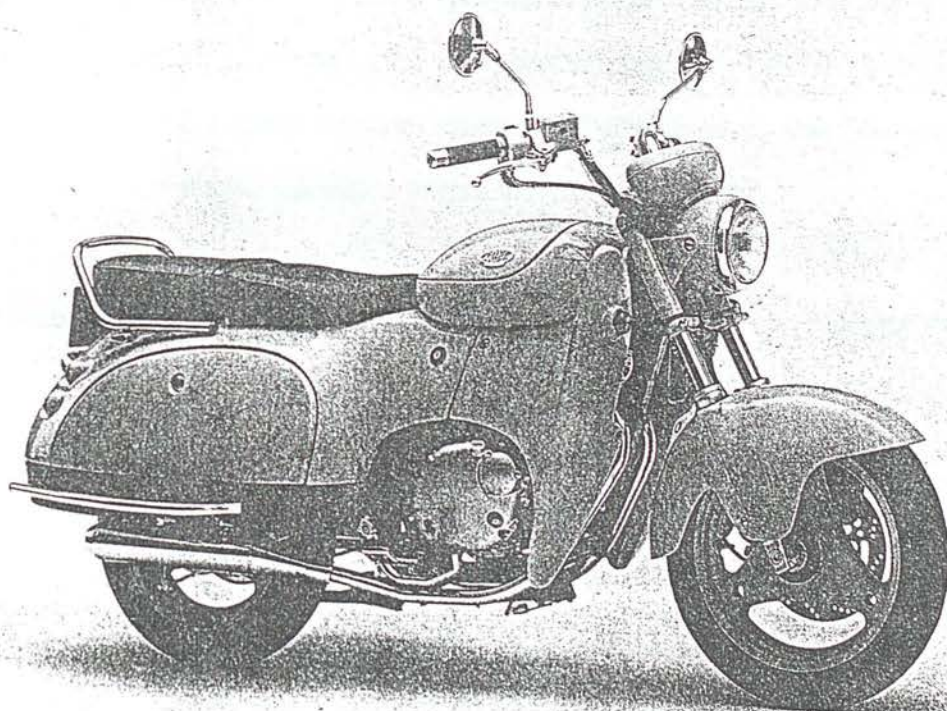
At the same time uncertainty makes flexibility a significant concept in production techniques and consumption modes in contemporary design. Batch production is a result of this flexible attitude. Fiction, fantasy dominate art and literature in an attempt to provide an imaginary way out of this unstable context. The forms and the ideas of these fields influence also designed products. The emergence of mass markets accelerated consumption in fashion products and home decoration products, leisure and sports products, and electronic games (44). Lifestyle became, especially in the 1980s, a category of consumer behaviour. Manufacturers and advertisers used lifestyle psychology to create demands for the non-essential products in a society where 'the individual has replaced the community with a set of imaginary friends' who share with him the same lifestyle (45).

In the context of a fragmented society, revival of past images and oversimplification of expressions and interpretations seem expected. This is more obvious in fashion, architecture and design. Retro design is one of the most extreme contemporary tendencies that exploit historical images and emotional nostalgic charges. Companies like Nissan or Suzuki through their Retro designs, e.g. Nissan Figaro car and SW-1 Suzuki motorcycle [fig.4a, b], attempt to discover the smallest possible gaps in the market selling not just the goods but also the message (46). Images have in a sense become commodities. This phenomenon led Baudrillard in 1981 to argue that Marx's analysis of commodity production is outdated because capitalism is now predominantly concerned with the production of signs, images and sign systems, rather than with the commodities themselves (47).





4a



4b

**Fig. 4a,b.** Retro design is one of the most extreme contemporary tendencies that exploit historical images and emotional nostalgic charges. Companies like Nissan or Suzuki through their Retro designs, e.g. Nissan Figaro car (1991) and SW-1 Suzuki motorcycle (1991), attempt to discover the smallest possible gaps in the market selling not just the goods but also the message.



The importance of image is that it brings 'simulacrum' to contemporary culture. 'Simulacrum' is defined as the almost perfect replication of forms, objects, ideas, or identities, where the difference between the original and the copy is negligible (48). Harmful effects could arise from this because ideas and identities (political, institutional, individual) tend to depend more and more on images. The ephemerality of images is tried to be balanced by an emphasis to the eternal truth and ideals. The increased significance of religion and the propagation of religious groups is a relevant example.

Image became very important to political and economic institutions and to corporations. They sought a stable image to retain and strengthen their power. Yet they also wished to project adaptability, flexibility and dynamism. Competition within the services sector has created a demand for stable, but adaptable imagery. Behavioural attitudes, advertising methods, visuals, working environment, and equipment are the main means of articulating this image. The appearance of the working environment, and office furniture in particular, is widely used to support the concepts of stability, status and adaptability. Industrial designers, interior designers and advertisers in this field seem to embody in their work elements calculated to gain the trust of the public.

The identity of place is significant in the search for security in a shifting world. Individuals and social groups try to secure the occupation of a space, which could be a room, a home, a shaping community, or a nation (49). On this F. Jameson (50) comments that space and spatial logic become increasingly dominant in our culture, our daily lives, and our psychic experiences. For example, the status of a person within the particular society is signified by such things as clothes, expensive cars with many accessories, nicely furnished houses and well equipped offices.

Collective identity is a means of combating ephemerality and fragmentation in philosophical and social outlook. Using images as commodities, oppressed groups and minorities try to establish their own identity. Ethnic style in music and fashion, one-offs

or batch produced designs influenced by the traditional crafts are examples of this search for identity. A desire for 'romance for the marginal' (51) sometimes accompanies this search. The quest to rediscover cultural values may be the reason for the pluralistic face of contemporary design. High technology, one-offs, anti-design, a return to historical styles, and use of pastiche to deprive style of historical context are intended to impress rather than to comment. Baudrillard maintains that this preference for the instant and for the experiment induces a form of social schizophrenia (52).

## **2.4 German, Greek, Italian, Spanish and United Kingdom's design in the 1980s**

### **2.4.1 German design**

The aesthetic of German production and design is often expressed by simple, geometrical, undecorated forms mainly determined by ergonomic and functional factors.

Peter Behrens' work for AEG and the Deutsche Werkbund at the beginning of the twentieth century first introduced the ideas for purity of form and functional design. The principles of the Modern movement, mainly expressed in Germany by the Bauhaus from 1919 to 1933, and later the impact of the Hochschule für Gestaltung in Ulm, which operated from 1953 to 1968, affected to a very great extent German production. The 'Modern' principles created a kind of tradition that determined a national code: the orthodoxy of design excellence based on truthfulness, ergonomics and functionality, and intended to serve the real needs of the consumers. Whether these ideas are an expression of the German character, or their extensive propagation by organisations, firms and specific designers determined contemporary German taste, is not easy to investigate. Probably, the truth is somewhere in between both arguments. The fact is that the most successful German companies have produced high quality products continuing a tradition of in-house design of rational, functional and truthful forms. Their international success



identifies German production with those values.

German aesthetic principles were greatly supported by German industry, as the latter was able to ensure reliability and a high degree of quality to the simplest of the forms. German industry is the major factor of the country's economic growth since the war, concentrating mainly on technical equipment rather than other design areas. The success of German manufacturers does not depend only on the right choice of products for production and the employment of good product designers, but also on their technological background. According to Aldersey-Williams' words: 'the best manufacturers do not only have the cultural confidence to employ and trust product designers, they also have the industrial wherewithal to ensure that the results of their endeavours will be solidly built and reliable in use. A typical Italian company, by contrast, does well in the former department but often lacks the technological base to ensure this degree of quality' (53).

German designers, supported by the high quality of their technological background, established a cultural tendency that avoids the overdecorated forms and respects the consumer. This tendency survives equally well when the economy is targeting years ahead and when instability affects all industrial and social groups. Additionally, the existence of strong corporations with in-house design facilities, in parallel to the few large design firms and consultancies helped to maintain the commitment to 'good form'. The designer Dieter Rams, director of product design at Braun, and the products of Braun themselves, express the typical German 'design austerity which turned into a mannerism and became associated with 'quality' and 'expense' (54). In his heater designed in 1955 [fig. 5a], and in his recent hair drier [fig. 5b], both designed for Braun, as well as in his 850 table designed for Vitsoe in 1985 [fig. 5c], Dieter Rams favours pure geometric forms, orthogonal shapes with simple and clean lines and meticulous, but minimalist detailing, that compose an ordered and harmonious whole. Even colour seems to be a compromise, often replaced by the various tones of a shadowed surface. Erco Leuchten, a

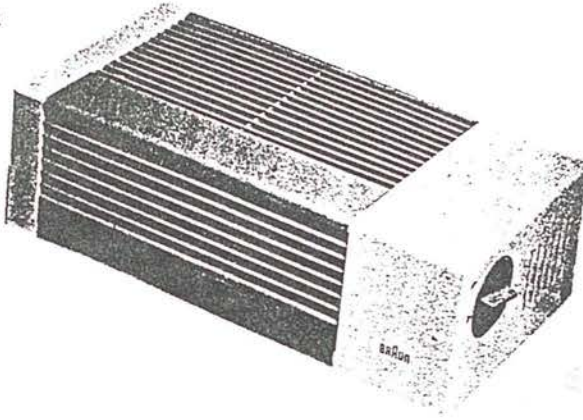


firm producing lighting fixtures, is another example of the dominance of the functionalist ideals. Although the designers employed are not always Germans, the result conforms to the company's standards because of specific directions: British Roy Fleetwood's design [fig. 6] has an instrumental look, metallic finish, geometric, but detailed forms, that are determined by the product's function, that give the object a 'German' look. The same principles are also expressed by many other successful companies such as AEG, Krups, Bosch, Siemens and BMW.

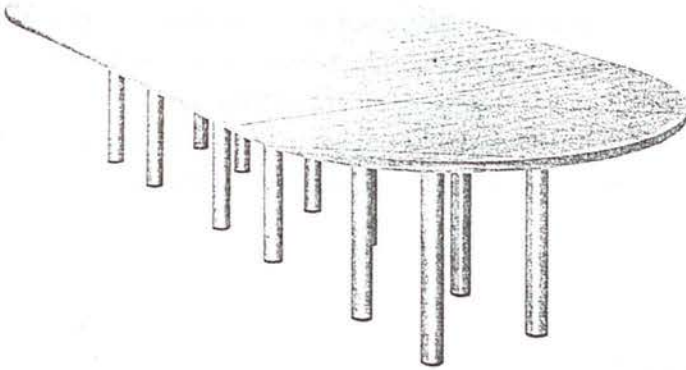
The rather slow and considered approach with great emphasis on details characterizes German production. In comparison to the British one the latter shows less concern for the quality of life in favour of speed and cost effectiveness. Another difference lies in the personnel scheme: 'It is quite usual (within German factories) for qualified craftsmen to become production foremen. Production workers are expected to show a high degree of maintenance "know-how" where their machines are concerned. Promotion in the 'line' is closely linked to the possession of technical expertise' (55). This is not the case in the majority of the European factories, where production and maintenance have drifted away from each other. Thus, the training and education system in Germany, provides a supply of people able to solve various problems in the factory effectively and act managerially. Effective production indicates a general educational tendency towards priority in design practice in comparison to design theory (56).

The recent international tendency for fun, vibrant, colourful, less austere forms and friendly objects, has also affected the rational German mainstream. Inventive design groups like Frogdesign and Phoenix seem to overcome the conventional German standards as far as form is concerned. Frogdesign is a relevant example because it interprets in a simple way the aesthetic demands of the time whilst respecting ergonomics and functionality. Frogdesign's iron and ironing board [fig. 7], with their round corners, curves and pastel colours, is an attempt to reconcile instruments with senses, especially visual and tactile, and create user-friendly objects.

5a



5b



5c

Fig. 5 a, b, c. In his heater designed in 1955 [5a], and in his recent hair drier [5b], both designed for Braun, as well as in his 850 table designed for Vitsoe in 1985 [5c], Dieter Rams favours pure geometric forms, orthogonal shapes with simple and clean lines and meticulous, but minimalist detailing, that compose an ordered and harmonious whole.

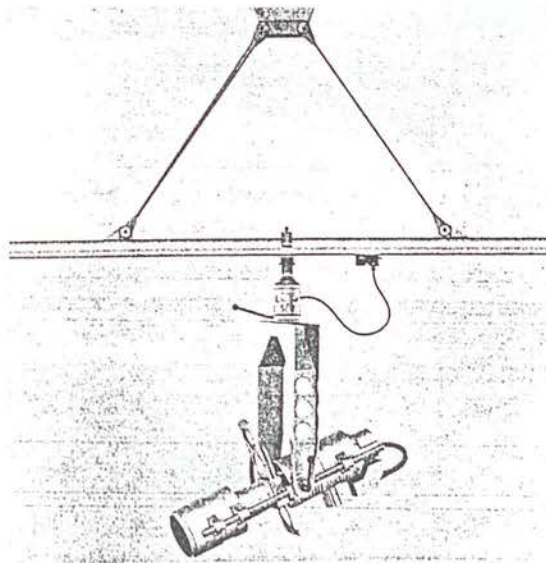
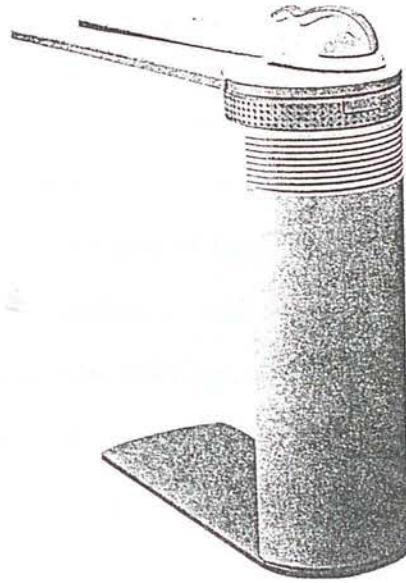
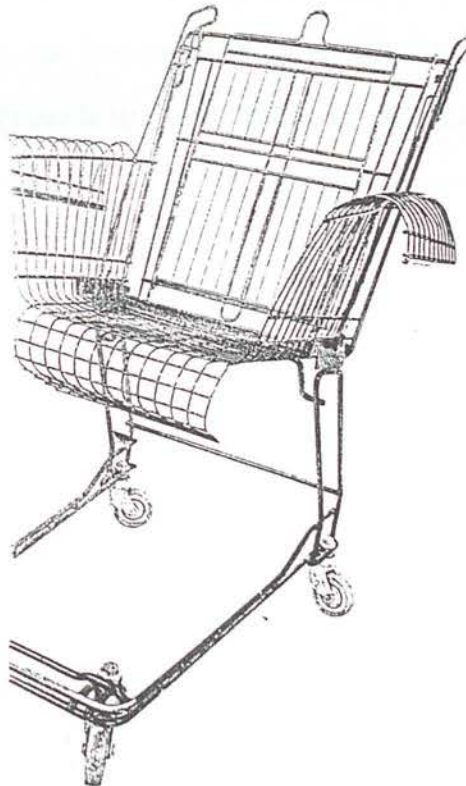


Fig. 6. British Roy Fleetwood's design for Erco Leuchten (1991) has an instrumental look, metallic finish, geometric, but detailed forms, that are determined by the product's function, that give the object a 'German' look.



**Fig. 7.** Frogdesign's iron and ironing board with their round corners, curves and pastel colours, is an attempt to reconcile instruments with senses, especially visual and tactile, and create user-friendly objects. Manufacturer: Frogdesign W Germany 1986/7

At the same time a few extremes appear in production of anti-functional objects by designers aiming to use form as a parody: Stiletto in his 'Consumer's Rest' chair [fig. 8] uses the form of a supermarket trolley as an icon of the Western consumer society.

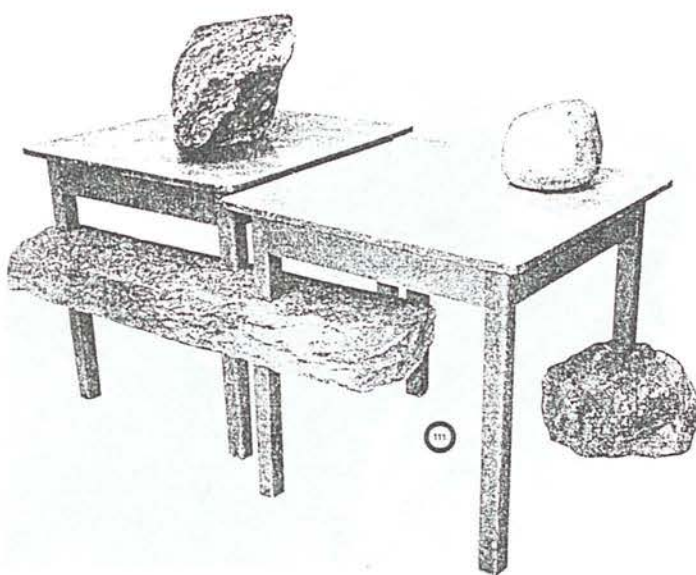


**Fig. 8.** Frank Schreiner/Stiletto in his 'Consumer's Rest' chair uses the form of a supermarket trolley as an icon of the Western consumer society. Prototype. Manufacturer: Stiletto Studios, W. Germany 1983.



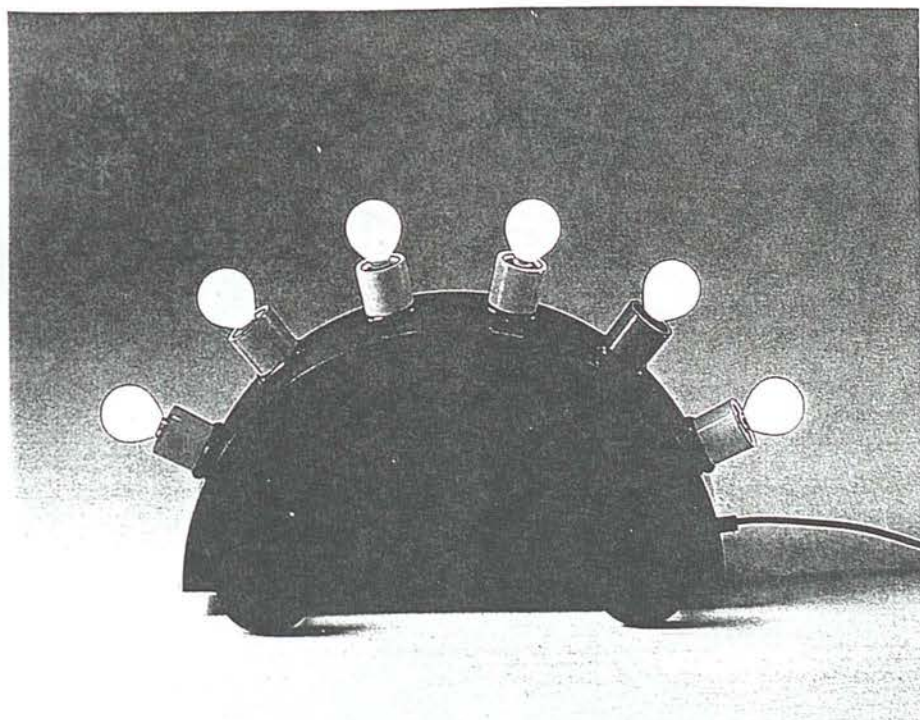
Various similar efforts towards one-offs and anti-design production characterize contemporary design in most of the western societies, in an attempt to create something different, impress and comment. The background of this attitude is discussed in the last paragraph of section 2.3. In the same direction, the work of the British-born designer Tony Cragg separates itself from the functional constraints of furniture and turns to the visual arts, by using pieces of furniture and various materials, such as stones, to structure images of his mind [fig. 9]. The Italian group of Memphis was the protagonist of the anti-design tendency which, in the first half of the 1980s, shocked the international design scene with its statusless, colourful and witty objects [fig. 10] in various shapes forms and colours, that were trying to express a message against sensibility and timelessness. Paolo Pallucco's and Mireille Rivier's movable *Tankette* table in the form of a tank, with a frame of steel, springs and aluminium peripheral wheels, is another ironical message of cultural criticism from Italy [fig. 11]. Eastern block states were also influenced. The Atika group from Prague supports new experimental forms of expression creating non-industrial objects, like the *Prague Spring* easy chair [fig. 12], made of traditional materials such as leather, wood and iron, expressing ecological awareness. It is obvious that all the above items are not made to fulfill functional purposes, but to express the criticism and the message of their creators, and as such they are closer to art than to functional or industrial production.

The city of Berlin during the 80s was the country's artistic centre, the place where any extreme, avant-garde and prototypical design flourished. The city's isolation from the rest of the country, before the fall of the 'Wall', encouraged this alternative approach to design. Experimental and ironic work opposed to the typical values of the German design became known as New German Design. The impresario behind the movement was Christian Borngräber, who established the Designwerkstatt as a forum for the manufacture and presentation of the prototypes of the movement. (57).



**Fig. 9.** Tony Cragg: Table sculpture, Element plane. Composition with tables and stones (1983).

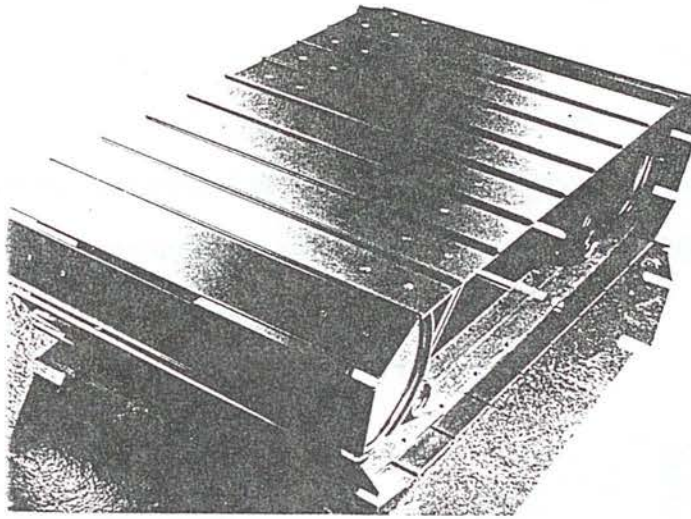
The work of the British-born designer Tony Cragg separates itself from the functional constraints of furniture and turns to the visual arts, by using pieces of furniture and various materials, such as stones, to structure images of his mind.



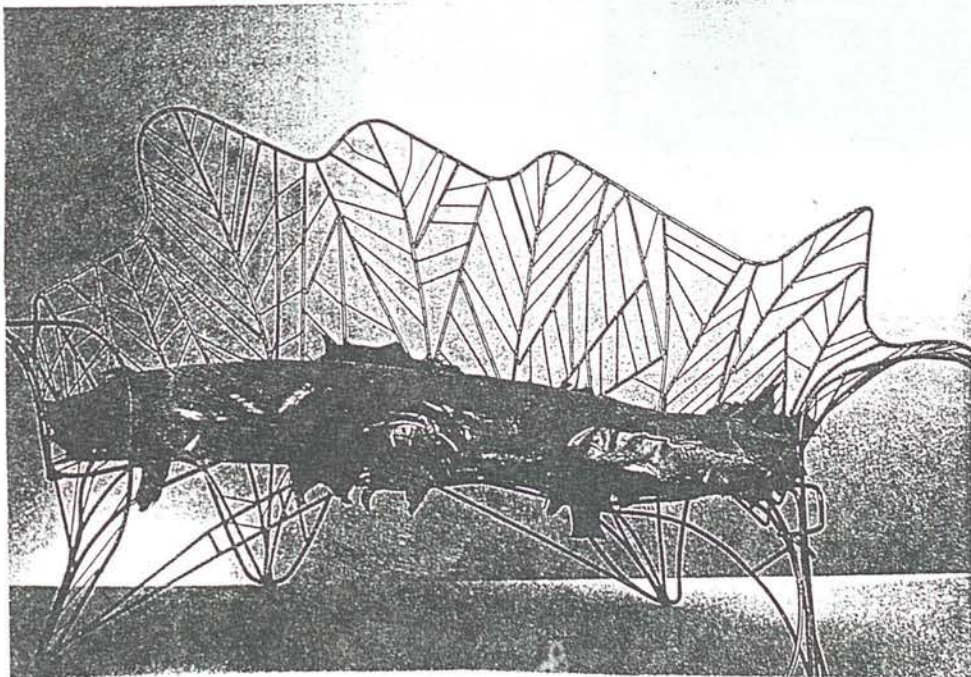
**Fig. 10.** Martin Bedin: Table or floor lamp. Manufacturer: Memphis Italy (1981).

The Italian group of Memphis was the protagonist of the anti-design tendency which, in the first half of the 1980s, shocked the international design scene with its statusless, colourful and witty objects in various shapes forms and colours, that were trying to express a message against sensibility and timelessness.





**Fig. 11.** Paolo Pallucco's and Mireille Rivier's movable *Tankette* table in the form of a tank, with a frame of steel, springs and aluminium peripheral wheels, is another ironical message of cultural criticism from Italy. Manufacturer: Pallucco Italy (1987/8).

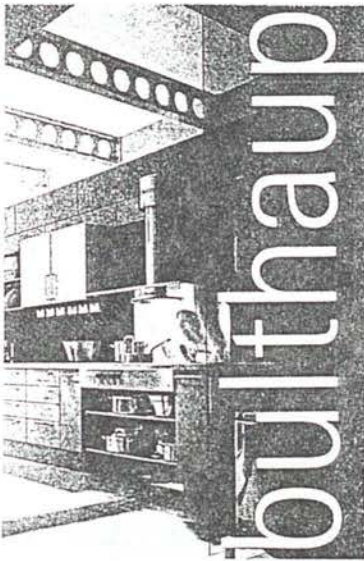


**Fig. 12.** Bohuslav Horak: 'A rotten luck easy chair.' Manufacturer: Atika Czechoslovakia (1988).

Eastern block states were also influenced. The Atika group from Prague supports new experimental forms of expression creating non-industrial objects, like the *Prague Spring* sofa, made of traditional materials such as leather, wood and iron, expressing ecological awareness.



In graphic design aesthetic standards changed by the use of other type-faces rather than Helvetica, which had dominated the area since the 1970s. Bulthaup kitchen manufacturer was among the first to adopt the Rotis faces for its company's logotype [fig. 13]. Another experimental group, Kunstflug, 'subverts the norms of information graphics with its warped airport signage in Düsseldorf airport' (58), [fig. 14].



**Fig. 13.** Bulthaup kitchen manufacturer was among the first to adopt Ott Aicher's Rotis faces for its company's logotype.



**Fig. 14.** Another experimental group, Kunstflug, 'subverts the norms of information graphics with its warped airport signage in Düsseldorf airport'. (1989)

The accuracy of the design process and the high level of technological background that supports it, is of major importance to German production. This priority determines the characteristics of simplicity, preference for geometrical shapes and lack of decoration. Therefore, stylistic experimentation is not regarded as safe for market success and becomes marginal and exceptional.

#### 2.4.2 Greek design.

In 1967, when the results of the international economic boom of the 1960s - discussed in section 2.1- started to appear also in Greece, a dictatorship isolated the country from the rest of the world and eliminated any progressive ideas. Democracy was reestablished in the country in 1974, by which time the first oil crisis had brought forward obvious signs of decline in the international economic boom.

These seven years of social isolation and the forced turning back to traditional values affected the country negatively by not permitting any participation in the rapid international economic and technological developments, as well as in the ideological and social ones (e.g. May 1968). The interest of the dictators in traditional values led, in the after-dictatorship period, towards a rejection of those values and their expressions and an admiration of anything foreign without critic.

Greece's poor economy and non industrial identity has its roots back in the occupation of the country by the Turks that started in the 15th c. and lasted in many parts of the country until the beginning of the twentieth century (e.g. Thessaloniki and most parts of northern Greece were liberated in 1912). Renaissance, Enlightenment and all the important developments in arts, industry and technology never passed the borders of the Ottoman empire and only the neo-classical principles spread in Europe in the nineteenth century, created a positive attitude in Europe that helped the Greeks in their fight for the liberation of the country. The state that was established in the nineteenth century was rather looking for an identity and as it was lacking the valuable experience of the recent industrial revolution, the country remained an agricultural one. Problems with neighbours in the north and the east, a civil war just after the second world war, as well as leaders lacking ability, were the main barriers to the development of the country. The peaceful and productive years from 1950 until 1967 and from 1975 until 1988 were not enough to create stability and economic development for the country. Since 1988, successive



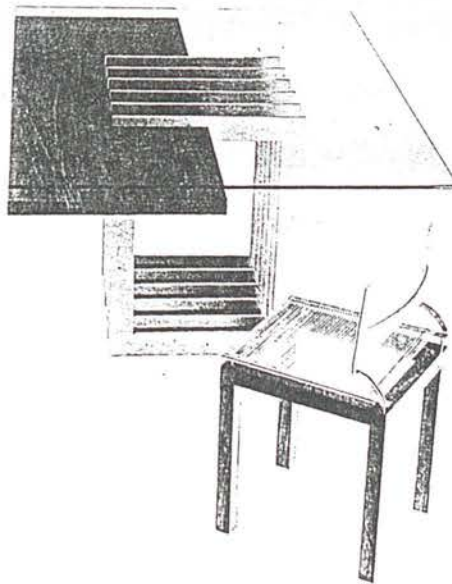
elections and bad administration of the economy, actually left the country far behind the European standards in economy and production.

As far as design is concerned, lack of funds and indifference are the major reasons that national production has been unsuccessful. Limited private initiative was the only means of progress for many years, which is not enough if there is not fertile soil to help it flourish. So, 'every one for himself' is the expression that suits the situation. Limited industrial production has not created the need for specialists in the field of design, and consequently for the establishment of any design and craft schools in the country, giving to a limited number of manufacturers the authority to produce what they thought would be commercially successful, most of the time making cheap copies of other European designs. Imported products were very expensive due to high tax levels. Lack of governmental concern about design and limited technological pedigree, discouraged designers of other disciplines, such as architects, to become involved with production. The interest in design became then theoretical and academic, a personal interest of a limited number of individuals and for limited time. Those who were interested, were restricted to the basic education within schools of architecture, designing one-offs, or objects not requiring high technological input, such as furniture. Simple forms and materials, such as wood, metal, glass, characterize most products. However, their design is not intuitive and practical, like the British one, but it is based on an idea which is either created by formal experimentation, or by theoretical principles. The *Epsilon* trolley [fig. 15 a] by the group Artion of metal sheet and wood is quite simple and orthogonal, a form which is directed by the material and its method of production. The dining table *Carnai* and the chair *Arpa* designed by A. Varotsos are an exercise on stereometric shapes applied to functional objects [fig. 15 b]





**Fig. 15 a.** The *Epsilon* trolley by the group Artion, made of metal sheet and wood is quite simple and orthogonal, a form which is directed by the material and its method of production.

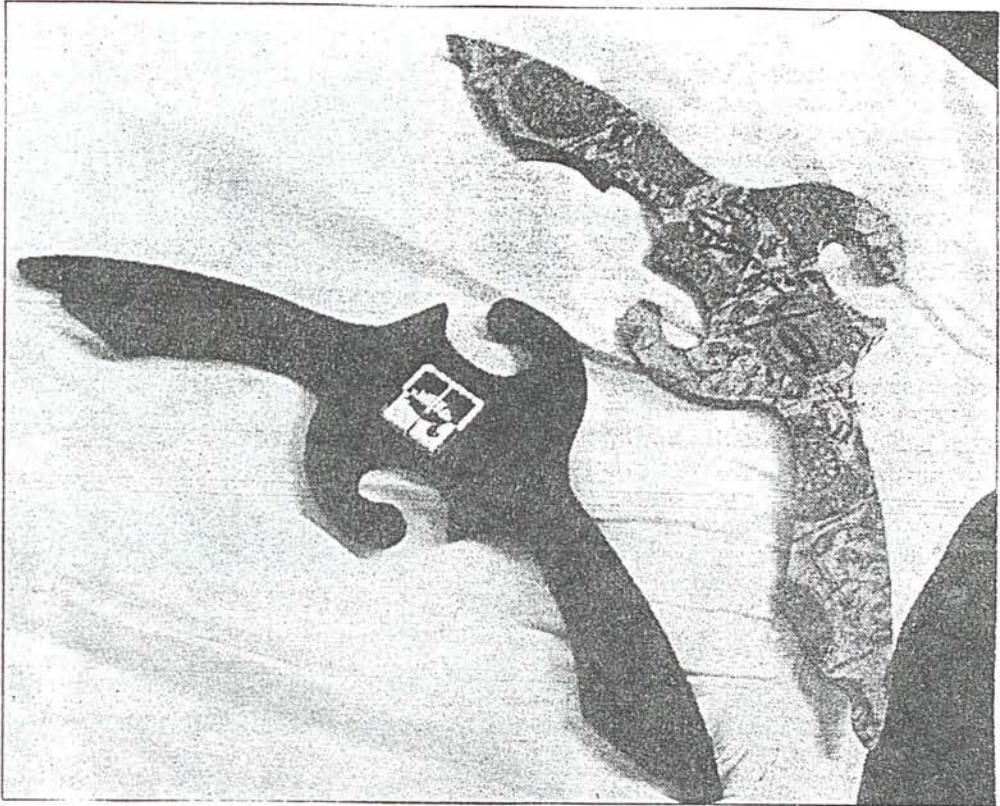


**Fig. 15 b.** The dining table *Carnai* and the chair *Arpa* designed by A. Varotsos are an exercise on stereometric shapes applied to functional objects. Manufacturer: Solomonidis, Greece.

In the late 1980s design objects became an expression of consumerism that satisfy the need for individuality and ownership. The search for quality and identity led to high consumption rates, especially between 1980 and 1988, when the economic situation of the people - in spite of the problematic national economy - was rather good, due to the so called 'submerged economy'. Increased numbers of imported goods, from magazines and household objects to cars, resulted in a radical alteration of the national identity. Additionally, the poor national economic situation led many big Greek manufacturing companies and design-advertising studios to be sold to multinationals, an event that limited competition between those and other small-size Greek companies, because small studios were unlikely to invest in complex marketing techniques and technology. The result is the diminishing of formal expressions of national identity and a monopoly in expression by multinational companies.

The increased numbers of small businesses in retailing and entertainment (bars, cafes and so on) favoured interior and graphic design for various reasons: technological requirements are not that high, small scale projects favour the existence of small studios and a variety of individualistic approaches. Multinational companies and large design groups don't find it profitable to work on logos, packaging and posters for fashion shops or bars. So, night life and fashion shops became a target for young designers, who were deeply influenced by contemporary stylistic tendencies, especially Italian production. Advertising was also a major success for Greek groups. Limited technological demands, economic support from companies pushing a marketing strategy, and inventive spirit, that makes the nation survive, were the most important factors for the development of this area. Product design was the least developed because of the country's non-existent industrial background. In the late 1980s a small number of private design schools introduced product and industrial design in education. The double sided hangers made of paper by Costas Panopoulos [fig. 16] show inventive spirit that follows the demands of its time for limited cost, ecological material and production, but also use of individual characteristics (e.g. colours, patterns), highly appreciated by the consumers of the 1980s.

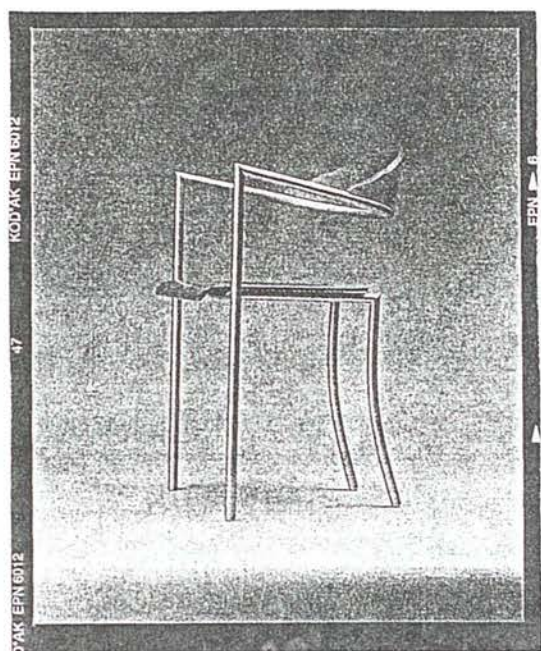




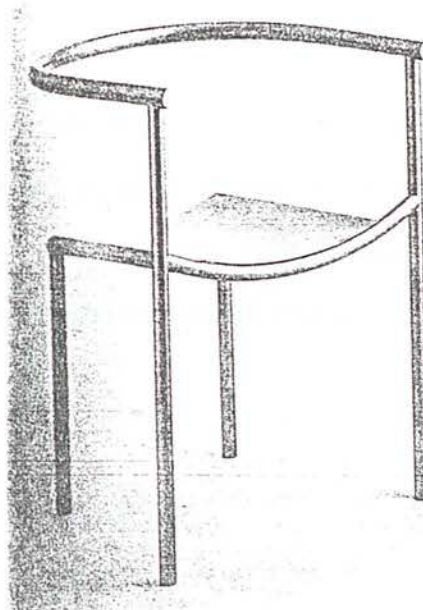
**Fig. 16.** The double sided hangers made of paper by Costas Panopoulos show inventive spirit that follows the demands of its time for limited cost, ecological material and production, but also use of individual characteristics (e.g. colours, patterns), highly appreciated by the consumers of the 1980s. 3rd year project in the AKTO design School.

Greek designers were during the 1980s at the very beginning of their entrance to the design scene. Therefore, the influence of imported goods and foreign production often overshadowed a national 'doric' spirit that characterizes traditional forms in architecture and utility objects and a preference for practical solutions. Influence from abroad is obvious in many items such as the *Varia* chair [fig. 17 a] designed by Artion group, that recalls the French Philip Starck's design of the *Von Vogelsang* chair [fig. 17 b], or the tableware by Eleni Mitropoulou [fig. 18 a] that recalls the architectural forms of Aldo Rossi applied to every day objects, such as the conical top used in his design for a coffee pot [fig. 18 b].



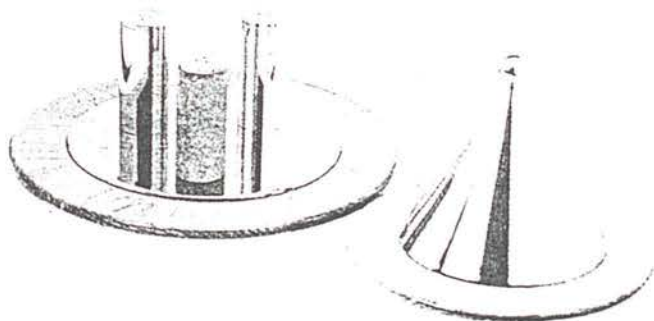


17a

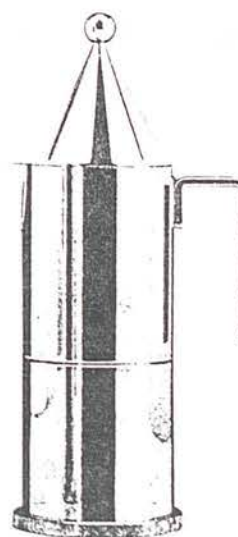


17b

Fig. 17. Influence from abroad is obvious in many items such as the *Varia* chair [a] designed by Artion group, that recalls the French Philip Starck's design of the *Von Vogelsang* chair [b].



18a



18b

Fig. 18. The tableware by Eleni Mitropoulou [a] recalls the architectural forms of Aldo Rossi applied to every day objects, such as the conical top used in his design for a coffee pot [b].

### 2.4.3 Italian design.

Italy built its industrial reputation after the second world war, achieving steady movement into markets in and outside of Europe, preserving 'in its industrial work the quality of inventiveness that had marked its artists and craftsmen in the past' (59). The 1960s were years of unprecedented success, and the Italian look became synonymous with pleasing visual effects. Innovative materials and eccentric forms were characteristics of the design of that period.

During the 1970s the international economic crisis affected Italian design, that became less energetic and youthful. 'Submerged economy', refers to a wide range of economic activities involving small and medium scale industry that flourish in every small Italian city and prosper, even when large national industries face periods of crisis. This saved Italy, according to Eco's analysis of Italian design (60). This small scale, specialised manufacturing that retained the quality of craftsmanship was adequately flexible to cope with economic difficulties and increased demands. Flexibility remains, according to the study findings, a key issue in Italian industry and organisations. The existence of numerous small and medium scale manufacturers backed a polymorphous picture of the Italian industrial product and pluralism in style. A traditional attitude caring about resources, energy and proper use of materials created a peculiar coexistence of craft and technology and a tendency to experimentation. The architectural training of most of the designers determines a more intellectual approach to design. The commitment to style and craftsmanship together, gave a unique interpretation of the tradition which was very different to that of the British, or the Germans. In Italy, novel forms are based on traditional concepts, while in Britain, conservative thinking remained attached to traditional forms. 'A produced object must look new, like a flower that has just bloomed, and at the same time like something familiar. All the efforts of post war Italian design lay in combining these two contradictory conditions' (61).



Italy's wealth has grown since the 1970s and this is owed to a great extent to the industry of the northern region and especially Milan, which is also the centre of design in Italy. The open-minded attitude of Italian industry is a major factor in the success of the Italian style internationally. In contrast to German industry that is based on technology, the Italians showed a love of form, exploring decorative ideas. Their approach is spontaneous and subjective and gave them the freedom to adopt various approaches without favouring any particular style. This has made Italy a hospitable place for designers of different nationalities who could see the applications of their creative thoughts brought to fruition.

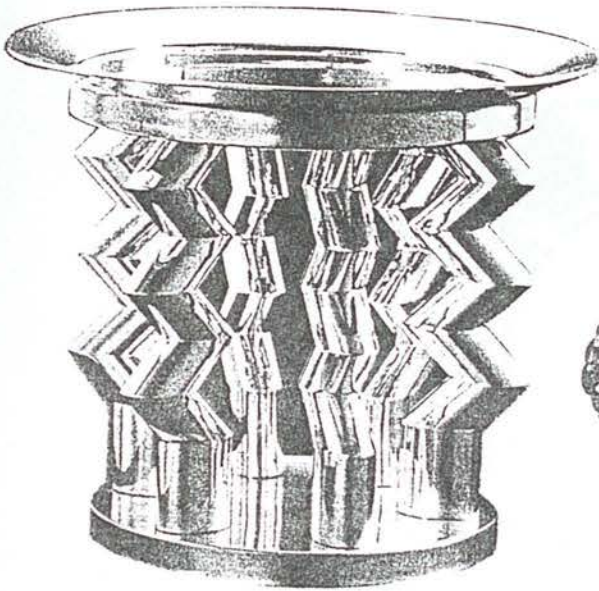
What through the years became important is the 'tension created by the simultaneous and contradictory existence of both mainstream and alternative design practice'(62). The anti-design movement, which first appeared in the late 1960s through the radical architecture of Archizoom and Superstudio, reappeared also in the late 1970s, first by the emergence of the studio Alchymia in 1976, and later by the Memphis movement in 1981 (63). Studio Alchymia was created by Alessandro Guerriero, who presented the ideas of a group of designers - Ettore Sottsass, Alessandro Mendini, Andrea Branzi among them - in two collections named 'Bau Haus' and 'Bau Haus Side 2' in 1979 and 1980. Mass reproducibility, mass dissemination of fine art imagery, as well as motifs and formal expressions from the 1950s provided the model for much of the work (64).

Studio Alchymia was a highly intellectualized attempt and remained as such during the 1980s with Mendini as its spokesman. Sottsass left the group and became the heart of Memphis group in 1981. He together with other designers, among them Michele De Lucchi, George J Sowden, Marco Zanini, Aldo Cibic, Matheo Thun, Martine Bedin and Nathalie Du Pasquier, were stimulated by pop culture and ancient cultures creating objects for manufacturing, related to the world of consumption and use (65), such as the Murmansk Fruit bowl [fig. 19 a], that recalls the form of a traditional african stool from Zaire [fig. 19. b]. The Memphis movement was welcomed in and outside of Europe



making Italian design known worldwide, rather through its anti-design than through its mainstream production. It became eventually a stylistic tendency offering examples for visual and surface effects to other design areas.

19a

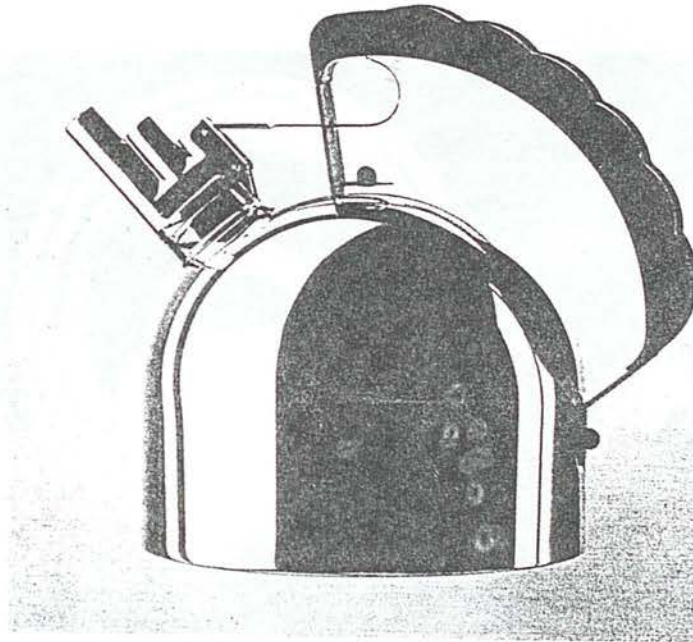


19b

**Fig. 19.** The Murmansk Fruit bowl [a], manufactured by Memphis, Italy (1982) recalls the form of a traditional african stool from Zaire [b]. This form of stool has taken on a complex symbolism for its users who are limited to senior members of the Bwami men's society. Wood and copper nails, Daniel P. Biebuyck Collection, Newark, Delaware.

Post-Modernistic attitudes in Italy offer an innovative formal approach which differentiate the Italian approach from this in USA, which is mainly characterised by formal expressions with historical content. Anti-design and post-Modernistic furniture and household objects were produced by big manufacturing companies such as Zanotta, Artemide and Alessi creating so an aesthetic tendency that characterized the early 1980s, but losing at the same time its shocking effect by being familiar to the public. Alessi in

particular commissioned a number of international designers to design a range of products that presented various post-modern approaches, such as the *Kettle with melodic whistle* designed by Richard Sapper [fig. 20]. High-tech and minimal approaches became also a common aesthetic.

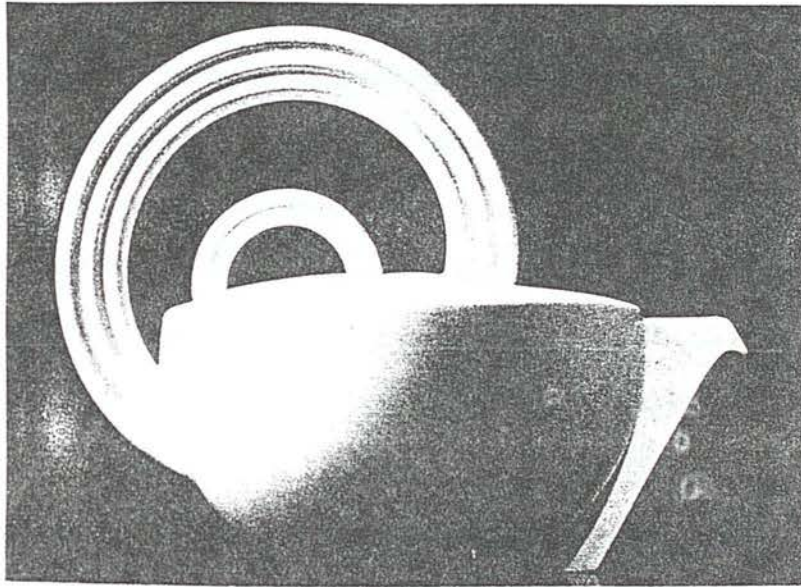


**Fig. 20.** Alessi in particular commissioned a number of international designers to design a range of products that presented various post-modern approaches, such as the *Kettle with melodic whistle* designed by Richard Sapper. Stainless steel with copper heat-diffusing bottom, brass whistle, pitched notes E and B, polyamide-covered handle. The whistle reproduces the sound of an American steam locomotive. Manufacturer: Alessi, Italy (1984/5).

International co-operation was another characteristic of the decade as far as design is concerned. 'Italian companies such as Driade, Cassina and Tecno commissioned designs from abroad, in particular from the Frenchman Philippe Starck, the Japanese Tokiyuki Kita and the English architect Norman Foster, in order to enrich visual stimulation. Italian designers, both mainstream and radical, among them Bellini, Giugiaro, Sottsass and Mendini, were all much in demand abroad'(66). This was one of the signs of the cultural pluralism of the 1980s, which coexisted with an Italian interpretation of concepts, as well as of life-styles. Mario Bellini's *Cupola* teapot for Rosenthal, Germany [fig. 21], and Tokiyuki Kita's *Wink* armchair for Cassina, Italy [fig. 22], are representative examples of this cross-cultural co-operation with influences from both sides: the designer's and the manufacturer's one. Bellini's teapot is a combination of a very sculptural approach close



to the Italian nature and a composition of some characteristics of the German attitude, such as the pure geometrical volumes and shapes, without the involvement of any colour. Tokiyuki Kita's armchair reflects the inventiveness of the Japanese spirit as far the multifunctionality of the object is concerned and the formal expressions of the rounded shapes and the variety of colours preferred by the Italians.



**Fig. 21.** Mario Bellini's *Cupola* teapot for Rosenthal, Germany is a combination of a very sculptural approach close to the Italian nature and a composition of some characteristics of the German attitude, such as the pure geometrical volumes and shapes, without the involvement of any colour. (1987/8)

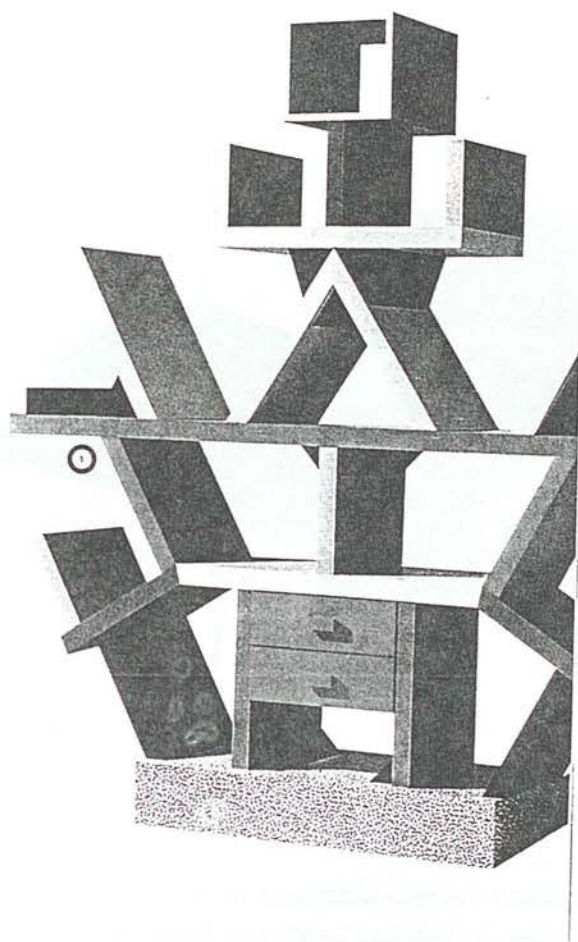


**Fig. 22.** Tokiyuki Kita's *Wink* armchair for Cassina, Italy, reflects the inventiveness of the Japanese spirit as far the multifunctionality of the object is concerned and the formal expressions of the rounded shapes and the variety of colours preferred by the Italians. (1981)

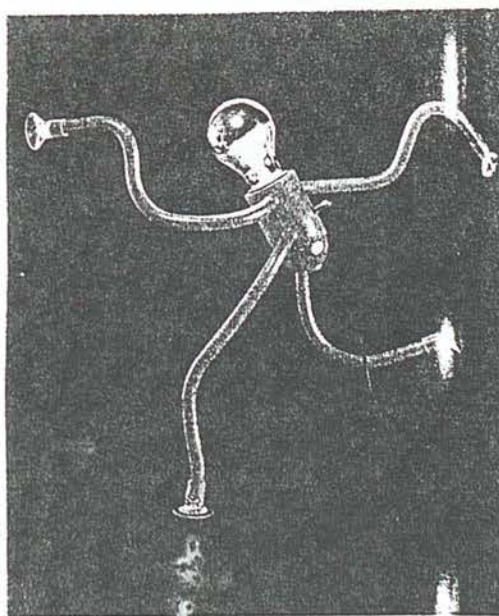


Formal experimentation and stylistic innovations are the main characteristics of the Italian design of the 1980s. Unconventional forms shock with their newness being at the same time friendly and familiar. A high level of technological background is achieved, that does not limit spontaneity and innovation in contrast to the German case. Ettore Sottsass in his Room divider *Carlton* [fig. 23] uses an interplay of bright colours and anthropomorphic forms to go beyond the traditional role of a piece of furniture. At the same time Sottsass reviews the use of plastic laminates as a friendly material changing the past image of the material which was identified with coldness and cheapness. Anthropomorphic forms are also used by Carlo Bellini and Marco Ferreri in their *Eddy* lamp [fig. 24] having four flexible limbs of coloured reinforced thermoplastic, that are both decorative and functional, but most of all create a funny, friendly object. Technological innovation and formal experimentation are witnessed also in Anna Castelli-Ferrieri's 4814 [fig. 25] armchair made of technopolymers and steel. A new injection moulding process creates a random spotted material. So, decoration results partly from the particular method of production. The idea behind the *Foglia* wall lamp by Andrea Branzi [fig. 26] is similar, where technology and formal experimentation co-operate and support each other. The lamp has the organic form of a leaf made of electro-luminescent glass. The electrical current of this low voltage lamp is conducted through the veins of the leaf. According to the above examples it could be argued that one of the major differences between German and Italian design, as far as technology is concerned, is the way of viewing and using technological innovation. While the Germans use technology to improve quality and facilitate function, the Italians use it in order to support formal experimentation and innovation

Another characteristic of Italian design is the large number of produced objects related to leisure time, such as cars, things for the home, coffee machines and so on. Leisure time for Italians is concerned with the interruption of the working day by going to the bar, which is a social mechanism in Italy, rather than the long weekends in the countryside (67).

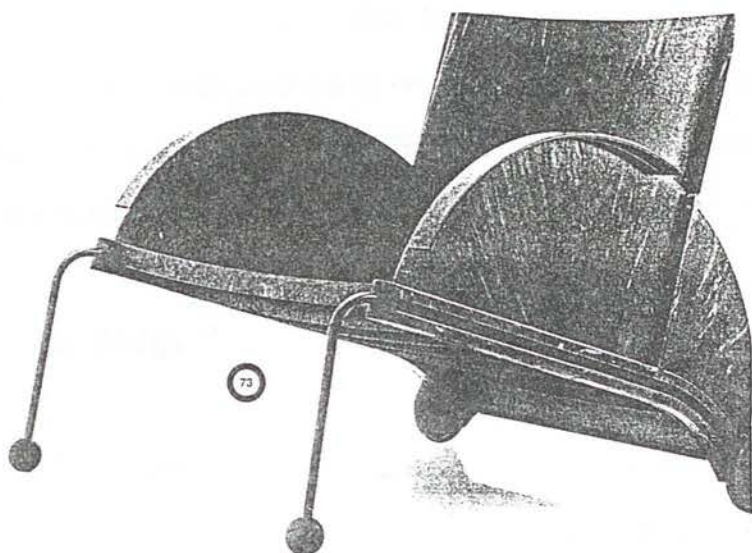


**Fig. 23.** Unconventional forms shock with their newness being at the same time friendly and familiar. Ettore Sottsass in his Room divider *Carlton* uses an interplay of bright colours and anthropomorphic forms to go beyond the traditional role of a piece of furniture. Plastic laminate. Manufacturer: Memphis, Italy, (1981).

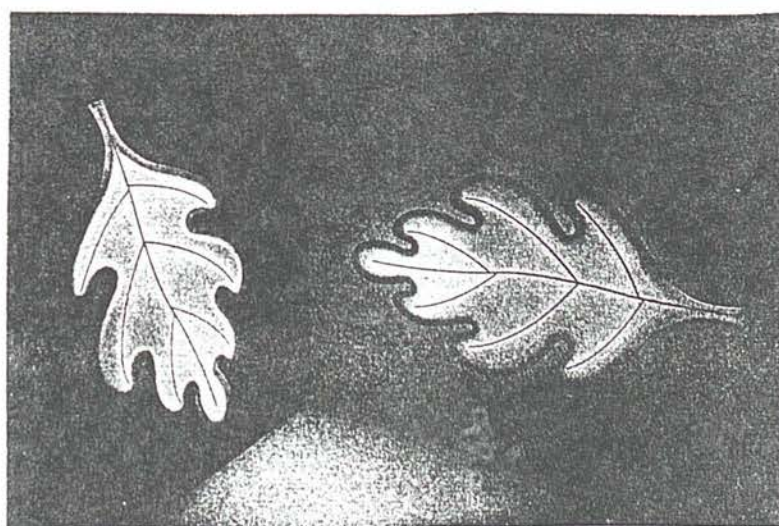


**Fig. 24.** Anthropomorphic forms are also used by Carlo Bellini and Marco Ferreri in their *Eddy* lamp having four flexible limbs of coloured reinforced thermoplastic, that are both decorative and functional, but most of all create a funny, friendly object. Manufacturer: Luxo Italiana, Italy (1986/7).





**Fig. 25.** Technological innovation and formal experimentation are witnessed also in Anna Castelli-Ferrieri's 4814 armchair made of technopolymers blend and steel. A new injection moulding process creates a random spotted material. So, decoration results partly from the particular method of production. Manufacturer: Kartell, Italy (1988/9).



**Fig. 26.** Technology and formal experimentation co-operate and support each other in the *Foglia* wall lamp by Andrea Branzi. Manufacturer: Memphis Italy (1988/9).

Besides furniture and household objects, Italy is known for its car industry and fashion. Fiat is the main car manufacturer and by 1985 became the biggest car producer in Europe. Car designers during the 1980s took over from the more traditional body stylist as the image maker of the automobile (68). Italian fashion is best known for its stylish ready-to-wear clothing which is produced in good quality fabrics. Small scale industries as well as merchant traders such as Fendi, Basile, Max Mara, Gucci, kept Italian fashion in its high place in the international market during the 1980s (69).

#### **2.4.4 Spanish design.**

After Franco's death in 1975, Spain underwent -like Greece - major political changes and consequently economic and cultural ones. Liberation from dictatorship, membership of the EEC since 1986, a peaceful environment, good relationships with other countries and freedom of expression led to an economic prosperity due to new modes of consumption, liberation of imports, new industries, and export growth, which, as a whole created a new image of the country internationally, pushing design to the forefront. Franco's policy to encourage manufacturing of cheap copies of European products, while restricting imports was superseded by spontaneous and enthusiastic production in every field (70). As a result, the rate of economic growth was higher in Spain than in any other European country during the 1980s. The high rate of economic growth created an optimistic environment for designers that lasted throughout the eighties and was accompanied by overproduction.

In contrast to the indifference of the Greek state as far as design and production are concerned, Spanish government, councils and other institutional bodies tried to complete the country's conversion through design. So, design was used in order to create a new national identity, but at the same time it managed to recover traditions. Programmes for the modernization of the nation were helped by high regional pride. The existence of distinct regions in Spain, striving to establish their own identities, was a positive factor

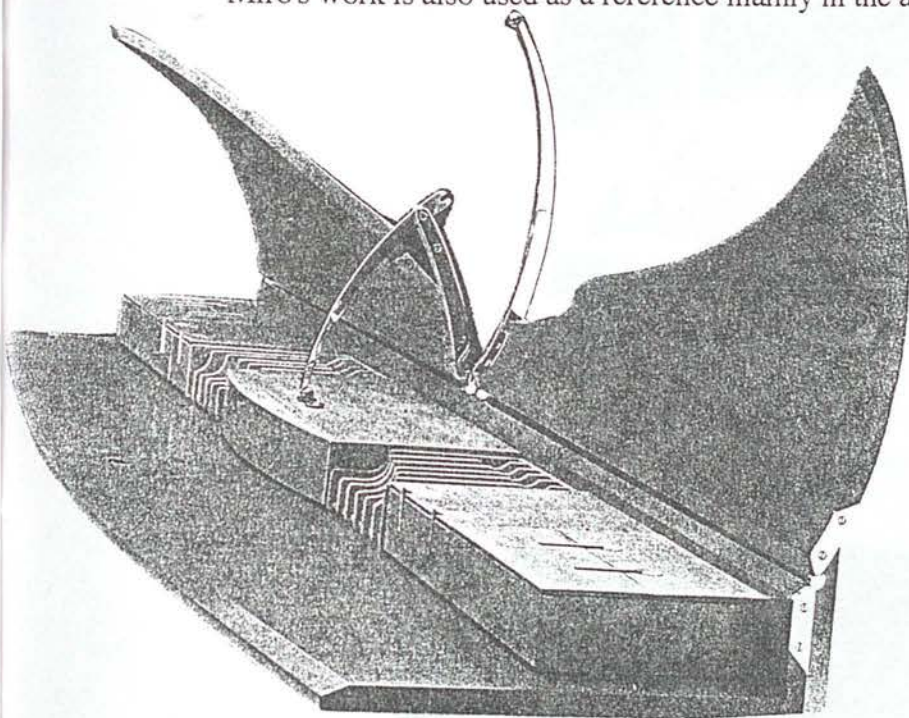


for the development of design in the country. In the wealthy Basque country, design was the most businesslike. The traditional crafts flourished in less industrialized regions like Andalusia and Galicia, while Valencia is associated with furniture making. Barcelona, with its rich past in artistic matters, became the great centre of design activity. Miró, Picasso and Dalí, as well as the architecture of Gaudí was the contribution of Barcelona to the country's artistic identity. The work of those artists has influenced a lot Spanish design in the 1980s. Islamic art is another source of inspiration for the Spanish designers. Africa's cultural link is closer with Spain than with the other Mediterranean countries, resulting from the Moorish invasion in the eighth century (71).

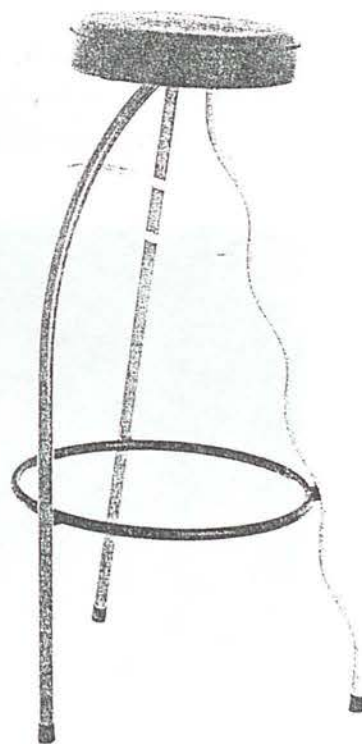
Three generations of designers appear on the contemporary Spanish design scene: 'Spain's pioneering designers began working in the 1950s, before the rapid technological and industrial development of the 1960s. Another generation, who are now in their forties, were educated within the radical resistance to Francoism in the late 1960s. The youngest designers have not worked under any period of dictatorship or experienced the economic depression of the 1970s, and yet are more susceptible to the myriad of influences that democratic Spain has thrown up' (72). Similarly to the Italians and the Greeks most Spanish designers have an architectural training and they work in various design fields.

Design in Spain in the 80s was characterised by a critical spirit, metaphors and a great ability to show respect for the past and its values while adapting to the new. The following objects are representative Spanish products that marked internationally the design production of the past decade. The use of symbolic forms is represented in the *Butterfly* desk by Tressera [fig. 27] worked like some exotic insect with its winged cover. The object's fine details reveal the designer's professional past as a goldsmith. The bright colours of the *Duplex* stool by Mariscal [fig. 28] are partly influenced by the Italian Memphis group but also by the designer's background in comics to which he owes a two dimensional approach to three dimensional objects. Innovative materials and methods of production as those seen in the *Toledo* chair made of cast aluminium by

Jorge Pensi [fig. 29], which although not representative of the Spanish production, broke new ground in furniture, bringing the late 1980s European interest in curves to cast aluminium. Eclecticism and historic references as those witnessed in the *Gaulino* chair by Oscar Tusquets [fig. 30] were influenced by the codes of an international post-modernistic tendency. The *Gaulino* chair makes a reference to the forms of Gaudí, the Art Nouveau architect. Similar references are often in the Spanish design of the 1980s. Miró's work is also used as a reference mainly in the area of graphic design.



27

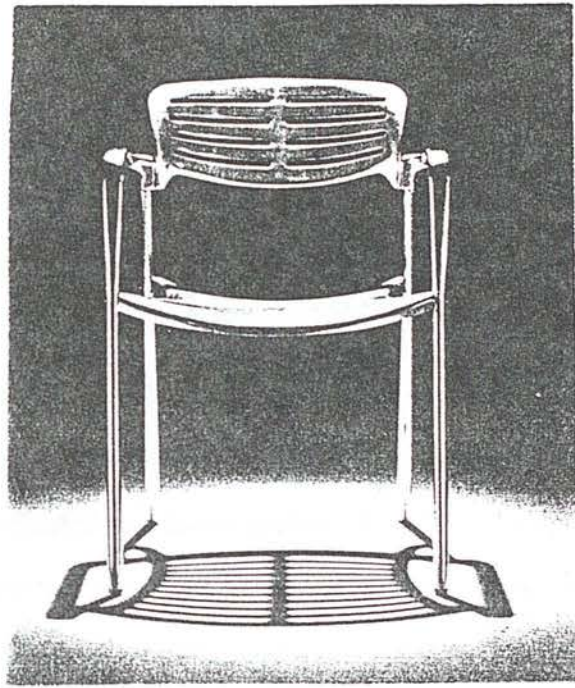


28

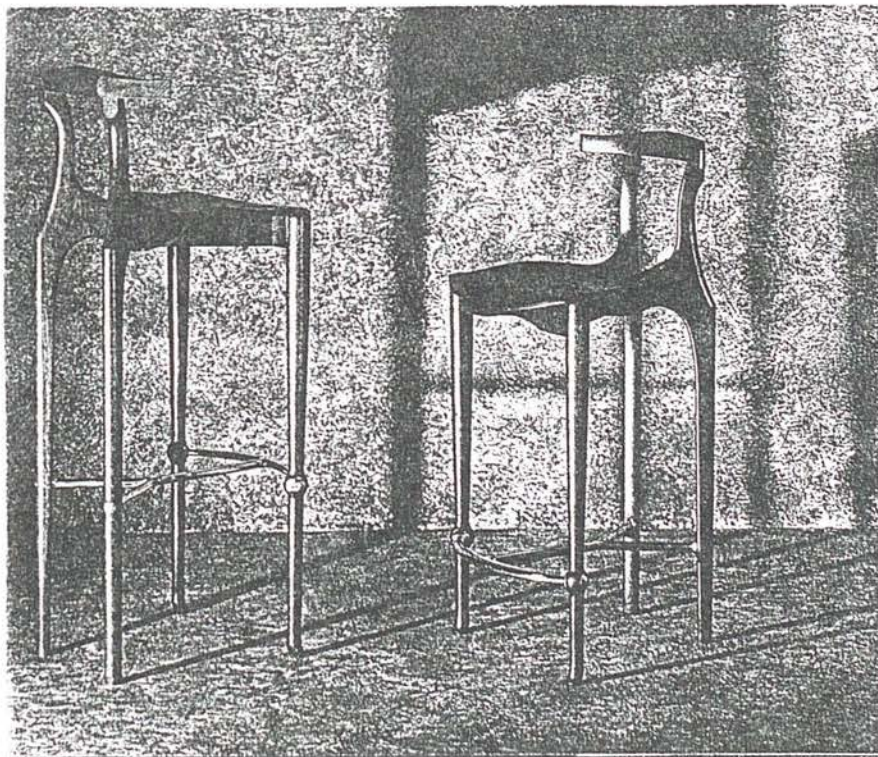
**Fig. 27.** The use of symbolic forms is represented in the *Butterfly* desk by Tressera worked like some exotic insect with its winged cover. The object's fine details reveal the designer's professional past as a goldsmith. J. Tressera Design, Spain (1988/9). Limited batch production.

**Fig. 28.** The bright colours of the *Duplex* stool by Mariscal are partly influenced by the Italian Memphis group but also by the designer's background in comics to which he owes a two dimensional approach to three dimensional objects. Javier Mariscal with Pepe Cortes B.D Ediciones deDiseño 1980.





**Fig. 29.** Innovative materials and methods of production as those seen in the *Toledo* chair made of cast aluminium by Jorge Pensi, although not representative of the Spanish production, broke new ground in furniture, bringing the late 1980s European interest in curves to cast aluminium. Manufacturer: Amat S.A. 1988.



**Fig. 30.** Eclecticism and historic references as those witnessed in the *Gaulino* chair by Oscar Tusquets were influenced by the codes of an international post-modernistic tendency. The *Gaulino* chair makes a reference to the forms of Gaudi, the Art Nouveau architect. Oak with calf hide upholstery and brass footrest. Manufacturer: Carlos Jane S.A. 1989.

Spanish design gained its worldwide recognition because of its presence in furniture design that is easily exported in comparison to interior or graphic design. furniture design did not need a high technological background and it was favoured by the government and organisations. In 1983 SIDI was founded by member companies and central government as an umbrella organisation for furniture manufacturers (73).

The rapid development of furniture design without the prior development of technological background had some negative effects. Limited resources, as well as lack of technological support, resulted in a lower quality of products compared with Italian and especially German products. The numerous small scale manufacturing companies, spread throughout the different regions of the country was not capable of producing small runs of extremely high quality. 'One of the major attractions of Spanish furniture for international buyers in the later 1980s was its relative cheapness as compared with Italian pieces in particular. The biggest complaint, though, was that it often did not compete in terms of safety and durability with Italian work. Crude joining, poor welding and badly finished upholstery in some cases detracted from the initial pleasure of vigorous, interesting forms' (74).

In Fashion design Sybilla seems to be influenced by the Islamic tradition. The only car manufacturer in Spain, SEAT, was bought during the 1980s by the German company VW/Audi. Graphic design, that during the dictatorship laid mostly in oppositional small scale activities, becomes also successful during the 1980s, although it is characterized by lack of specialization. Many small studios absorb work coming from the expansion of opportunities in industry, public commissions of governmental councils and other institutional bodies, as well as from the new fashion shops and bars that followed the strict period of dictatorship (75). Very few studios are able to concentrate on large corporate identity programmes, projects that are undertaken by multinational publicity agencies (76). Product design is the least developed area mainly because of the lack of technological background but also because of Spain's economic structure. But SOLAC,



Spain's leading domestic appliance manufacturer, manages to compete to international standards due to market research and design consultancy.

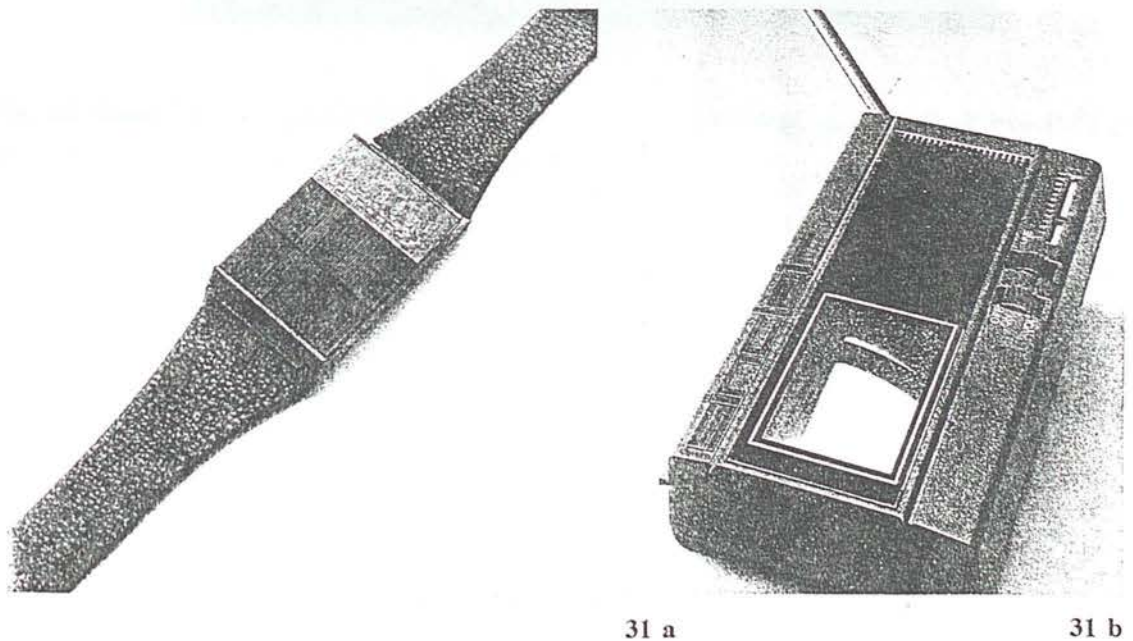
Internationalism, but also regional diversity, enthusiasm, energy, together with a lack of experience in the world market and lack of technological background are the main characteristics of Spanish design in the 1980s.

#### **2.4.5 British design.**

The British approach to design is characterised by a number of values that could be taken as national characteristics, mainly because they have to do with a certain attitude of the people: commonsense, rationality and moderation. It seems that the 'fitness for purpose' ideal of the DIA (Design and Industries Association) (77) is rooted in the nature of these people living in a big island 'where the landscape appears to have much in common with the products it spawns....all is measured, mingled, varied, gliding easily one thing into another, little rivers, little plains, little hills'(78). In history little social upheaval is testified and in the history of the British visual arts, too, extremes are few and far between (79).

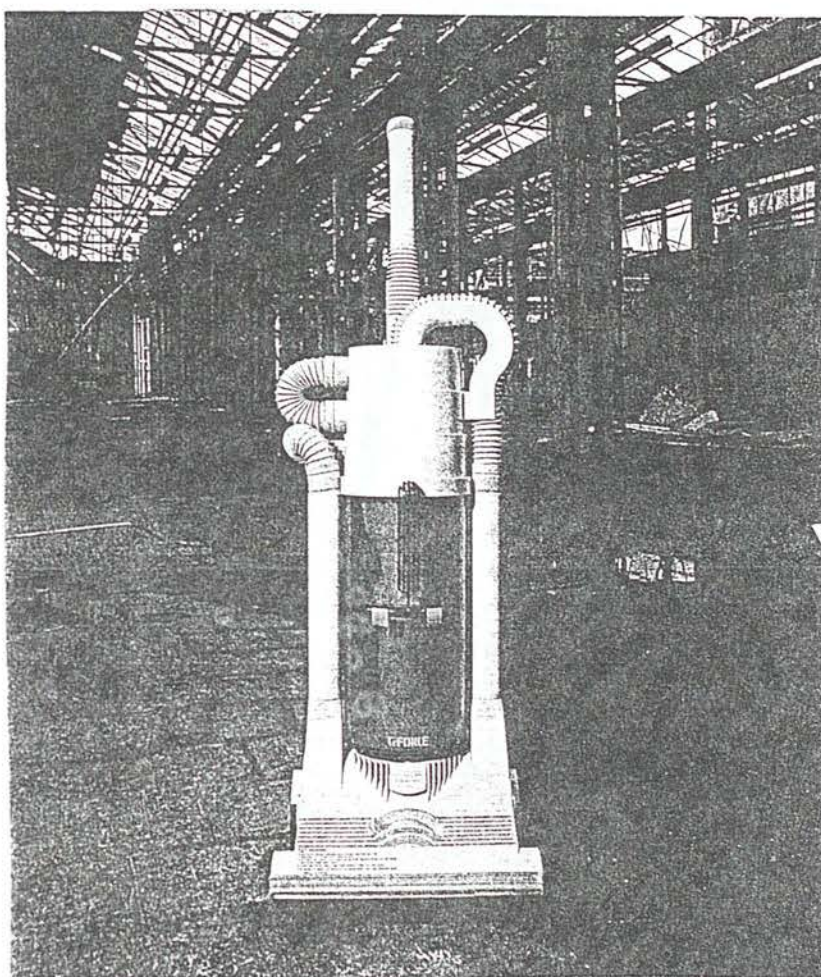
Usefulness, good value for money and practicality, are of major importance to British designers and manufacturers. Moreover, attachment to tradition, social consciousness and a desired social insularity determine the structure of British production. In contrast to the German attitude towards a rational, 'orthodox' approach as a result of an ideological opposition to individualism, the British seem to base their creations on practice rather than philosophy. This explains why British design rarely became obsessed with most of the foreign design tendencies and movements. Modern movement, or post-Modernism affected to a much lesser extent the British market than the rest of the European markets. British practicality in design is a personal expression of a compromise between useful and decorative, factual and romantic and could be characterised as intuitive. As a result, conventional production is an expected outcome,

especially when limited cost is a determinant. Poor quality everyday products coexist with traditionally good quality craftsmanship and inventions often do not become successful market products. Clive Sinclair's products such as the *Executive* calculator (1972), the *Black Watch* (1975)[fig. 31 a] and the *Microvision* pocket TV (1983) [fig. 31.b] offer relevant examples. Although they were based on innovative ideas, production was defective and marketing very poor, subsequently losing out to other competitive products (80). Additionally, many innovative products and designers became successful outside of the British market. James Dyson's vacuum cleaner *Cyclon* [fig. 32] was produced finally in Japan after years of attempts to be produced in Britain. Both British manufacturers and consumers were not able, or willing to follow the change from the durable, rational and technical design, that characterized the first period after the World War II to the fashionable, short-lived and easy to sell design.



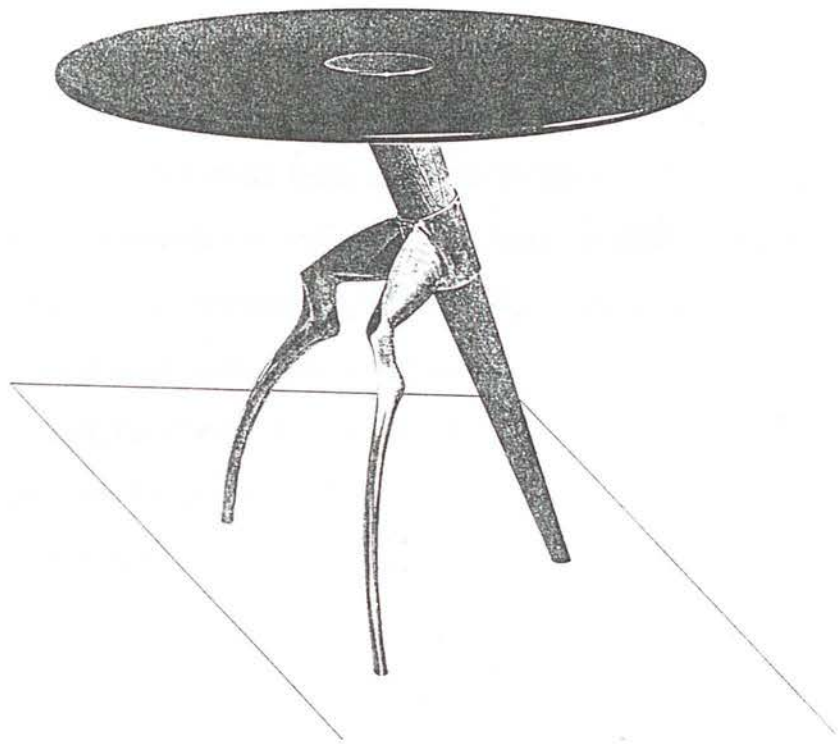
**Fig. 31.** Clive Sinclair's products such as the *Black Watch* (1975) [a] and the *Microvision* pocket TV (1983) [b], although they were based in innovative ideas, production was defective and marketing very poor, subsequently losing out to other competitive products. Sinclair Research Ltd., plastics.



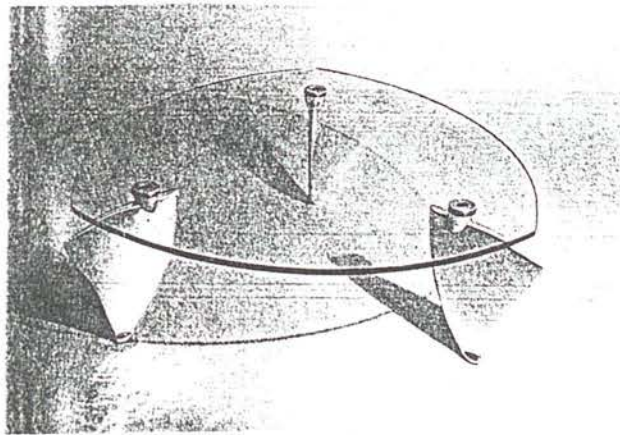


**Fig. 32.** James Dyson's vacuum cleaner *Cyclon* designed in 1979 was produced finally in 1985 in Japan by Apex Inc., after years of attempts to be produced in Britain.

Although British design is generally characterised as non-extreme, a few extreme, eccentric and individualistic approaches appear mainly by new designers. The designer Matthew Hilton uses quotations from nature to create objects of cast aluminium, wood and glass in organic forms such as his *Antelope* table and *Flipper* table.[fig. 33 a, b] The pair of antelope legs of cast aluminium that support the three legged table are sculptural units reviving Art Nouveau spirit and the legs of the Flipper coffee table, as it can be detected by the name, recall shark or dolphin flippers. Although the organic forms lead to a 'back to nature' tendency, the use of replicas of parts of bodies, buildings or even paintings is a post-modern characteristic.



a



b

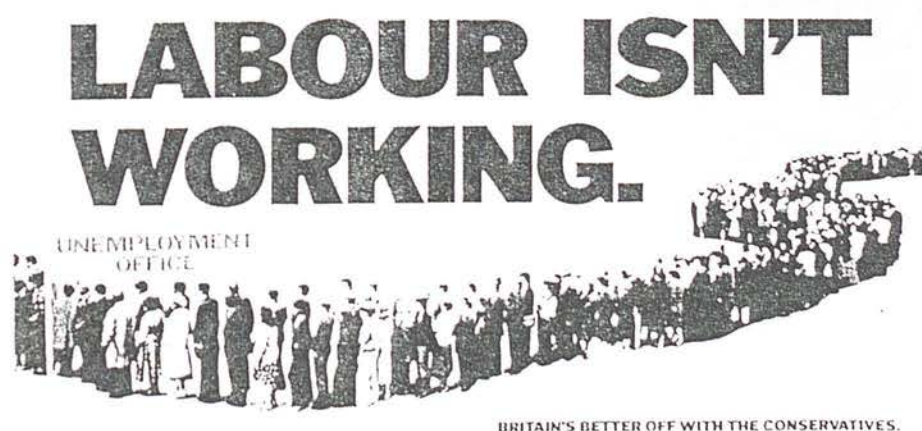
**Fig. 33.** The designer Matthew Hilton uses quotations from nature to create objects of cast aluminium, wood and glass in organic forms such as his *Antelope* table [a] and *Flipper* table [b].

The pair of antelope legs of cast aluminium that support the three legged table are sculptural units reviving Art Nouveau spirit. Manufacturer: Matthew Hilton, UK (1987/8), limited batch production.

The legs of the Flipper coffee table, as it can be detected by the name, recall shark or dolphin flippers. Manufacturer: SCP, UK (1988/9).



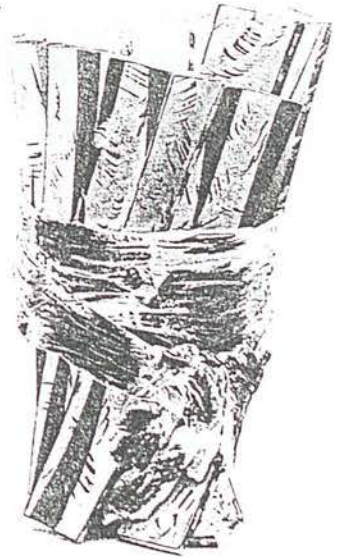
In contrast to the British manufacturing and product development, British design consultancies gained worldwide recognition during the 1980s. The lack of demand by the British manufacturing companies led British designers to turn to international markets. Their high level of educational standards together with broad technical background helped establish a good reputation in the field. Demands for sophisticated packaging, graphics, advertising and corporate identity contributed to the rapid growth of design consultancies. Many of the big British consultancies work for European or American firms offering services for success through design and advertising. According to Huygen, "the pragmatic, practical, fair-minded British designer - heedful of the British tradition, willing to compromise - had found with his in no way extreme or outspoken design tradition, an effective way of meeting the demand by the international market for elegant, acceptable products" (81). Britain's reputation in advertising was an important support. Uncomplicated, explicit, well structured messages presented in an intellectual way characterize most of the British work in the field, such as the poster for the campaign for the conservative party in 1979 [fig. 34].



**Fig. 34.** Uncomplicated, explicit, well structured messages presented in an intellectual way characterize most of the British work in the field, such as the poster for the campaign for the conservative party in 1979. Saatchi & Saatchi art director, Martyn Walsh, copywriter, Andrew Rutherford.

Fashion, fashion stores and chain stores became more consciously design aware during the 1980s and established a particular image and a process in order to obtain it. The importance of image and corporate identity adopted by chain stores, such as Mothercare, the Body Shop, Habitat, Laura Ashley, that dominate British High Streets led independent shopkeepers to try to compete in order to survive. As a result, packaging, interior design and graphic design became an important constituent of the retailing success.

Growth in the number of small businesses, helped by the government, offers a variety of interpretations, and some of them tend to be characterised as extremes, at least within Britain. An international tendency towards traditional values, among others encouraged ethnic styles in fashion and music and was interpreted in Britain as a return to traditional craftsmanship. Textiles and ceramics [fig. 35], handmade and one-off items, attempting to reconcile traditional process with modern forms, became a trend during the 1980s. An increased interest in the applied arts affected education consequently. New courses appeared in the fields of applied arts and traditional design areas.



**Fig. 35.** Vase designed by Carol McNicoll, probing the limits of the pot shape, earthenware, collection Boymns-van Beuningen Museum, Rotterdam. Textiles and ceramics, handmade and one-off items, attempting to reconcile traditional process with modern forms, became during the 1980s a trend.

Contemporary British design with the above characteristics and with influences from the mass media, mass culture and multinational production, offers a mixture of references, images and new ideas. British design is a vivid example of the coexistence between global and national production.



## REFERENCES

- (1). David Harvey, *The Condition of Post-Modernity: an Enquiry into the Origins of Cultural Change*, (Oxford: Basil Blackwell, 1990), p. 145.
- (2). Jan Erik Lane and Svante O., Errson, *Politics and Society in Western Europe*, (London, Sage, 1986) p.55.
- (3). David Harvey,op.cit., p.124.
- (4). Richard Bourne, Nine Varieties of European, in *New Society*, (7 June 1979), p. 570.
- (5). Jan Erik Lane and Svante O., Errson, *Politics and Society in Western Europe*, (London, Sage, 1986) p.55
- (6). .David Harvey,op.cit., p.142.
- (7). Jan Erik Lane and Svante O., Errson, op. cit., p.4.
- (8). David Harvey,op.cit., p.145.
- (9). ibid., p. 145.
- (10). ibid., p. 145.
- (11). Cosmo Rusell, Europe in the New Decade, in *Contemporary Review*, no 236, (Feb. 1980), p.57.
- (12). David Harvey,op.cit., p.147.
- (13). ibid., p.147.
- (14). ibid., p.151.
- (15). ibid., p.150.
- (16). ibid., p.169.
- (17). ibid., p.170.
- (18). ibid., p.170.
- (19). ibid., p.164.
- (20). Peter Hall, Patterns of Economic Policy: An Organisational Approach, in *The State in Capitalist Europe*, ed. by S.Bornstein, D. Held, J. Krieger, (Allen &Unwin, Inc. Mass., USA, 1984), pp. 25-35.

- (21). David Harvey, op.cit., p.152.
- (22). ibid., p.155.
- (23). ibid., p.155.
- (24). ibid., p.156.
- (25). Robin Roy and David Wield, *Product Design and Technological Innovation*, (Open University Press, 1986), p.152.
- (26). ibid., p.153.
- (27). David Harvey, op.cit., p.156.
- (28). ibid., p.156.
- (29). ibid., p.159.
- (30). ibid., p.160.
- (31). Cosmo Rusell, Europe in the New Decade, in *Contemporary Review*, no 236, (Feb. 1980), p.59.
- (32). ibid., p.60.
- (33). Jan Erik Lane and Svante O., Errson, op. cit., p.52.
- (34). Anthony Barnes, *Europe, People and Society*, (London, Harrap, 1980), p.12.
- (35). Fredric Jameson, Post-modernism or the Cultural Logic of Late Capitalism, in *New Left R.*, no 146, (Jul./Aug. 1984), p.78.
- (36). Daniel Bell, *The coming of the Post-industrial Society*, 1973.
- (37). Krishan Kumar, Industrialism and Post-industrialism: Reflections on a Putative Transition, in *Sociological Review*, no 24, (Aug. 1976), p.445.
- (38). ibid., p.445.
- (39). ibid., p. 203.
- (40). David Lyon, From Post-industrialism to Information Society, a New Social Transaction?, in *Sociology*, no 20, (Nov. 1986), p.583.
- (41). Jan Erik Lane and Svante O., Errson, op. cit., p.4.
- (42). ibid., p.4.
- (43). ibid., p.3.
- (44). David Harvey, op.cit., p.285.



- (45). Jo Vale, Hunting in Packs, Advertising Agencies, Lifestyle and Consumer Behaviour, in *Listener*, (23 Mar. 1989), p.14.
- (46). Matthias Dietz and Michael Mönninger, *Japan Design*, (Frankfurt, Taschen, 1992), p. 126.
- (47). David Harvey, op.cit., p.287.
- (48). Frederic Jameson, op.cit., p.66.
- (49). David Harvey, op.cit., p.302.
- (50). Frederic Jameson, op.cit., p.64.
- (51). Stephen Connor, *Post-modernist Culture*, (Oxford, Basil Blackwell, 1990), p.228.
- (52). Jean Baudrillard, The Ecstasy of Communication, in *The Anti-aesthetic, Essays on Post-modern Culture*, ed. Hal Foster, (Port Townsend, Bay Press, 1983), p.132.
- (53). Hugh Aldersey-Williams, *World Design, Nationalism and Globalism in Design*, (New York, Rizzoli International Publ. Inc., 1992), p. 32.
- (54). Penny Sparke, *Design in Context*, (London, Bloomsbury Publishing Ltd., 1987), p.
- (55). M. Fores & A. Sorge & P. Laurence, Why Germany produces better?, in *Management Today*, (Nov. 1978), p. 89.
- (56). Francois Burkhart, Tendencies of German design theories in the past fifteen years, in *Design Issues*, vol. 3, no2, (Fall 1986), p.31.
- (57). Hugh Aldersey-Williams, op. cit., p. 36.
- (58). *ibid*, p. 35.
- (59). Giulio Carlo Argari, Italian Design, in *Italian Re-evolution; Design in Italian Society in the Eighties*, (California, La Jolla Museum of Modern Art, 1982).
- (60). Umberto Eco, Phenomena of this sort must also be included in any panorama of Italian design otherwise it is hard to grasp an idea of Italy itself or of design, in *Italian Re-evolution; Design in Italian Society in the Eighties*, (California, La Jolla Museum of Modern Art, 1982), p. 132.

- (61)       ibid, p. 132.
- (62)       Giulio Carlo Argari, op. cit., p. 15.
- (63)       Penny Sparke, *Italian Design, 1870 to the present*, (London, Thames and Hudson, 1988), p. 229.
- (64)       Nally Bellati, *New Italian Design*, (London, 1990), p. 13.
- (65)       Penny Sparke, op. cit., p. 213.
- (66)       ibid, p. 215.
- (67)       ibid, p. 220.
- (68)       ibid, p. 208.
- (69)       ibid, p. 203.
- (70)       Emma Dent. Coad, *Spanish Design and Architecture*, (London, Cassel, 1990), p. 17.
- (71)       Hugh Aldersey-Williams, op. cit., p. 74.
- (72)       Guy Julier, *New Spanish Design*, (London, Thames and Hudson, 1991), p.7.
- (73)       ibid, p. 50.
- (74)       ibid, p. 63.
- (75)       ibid, p. 95.
- (76)       ibid, p. 89.
- (77)       Frederique Huygen, *British design, Image and Identity*, (London, Thames and Hudson, 1989), p. 23.
- (78)       ibid, p. 20.
- (79)       ibid, p. 21
- (70)       ibid, p.59.
- (71)       ibid, p. 71.



### 3 . THE MEANINGS OF OFFICE DESIGN.

The thesis argues that industrial design, and in particular the material outcome of the design process, is closely related to its sociocultural context, reflecting through its form the values and the concepts of that particular context. In that sense, manipulations of form signify meanings and design is regarded as a means of signification. However, signification in design is not the same as in verbal language. To be associated with a symbolic meaning, in addition to a function, is different from being defined as a mere symbol.

The complex nature of design makes the particular subject of investigation extremely difficult. According to Daniel Miller (1) "the physicality of artifacts makes them much harder than language to extricate from the particular social context in which they operate, and that for this reason they pose a particular problem for academic study". A part of the theoretical background of this study is based on Daniel Miller's attempt to investigate the interaction between material culture and context and the implication of the substance of the object as a symbol. Miller acknowledges that no academic discipline examines the nature of artefacts as cultural forms. He states that natural sciences tend to be concerned with the natural substance of objects, psychology does not differentiate between artifacts (e.g. cutlery) and natural objects (e.g. trees), and consumer psychology does not deal with the nature of artifacts as concrete material culture; only the sub-section of anthropology known as material culture studies seems to come near to the subject (2).

A similar approach is attempted by Adrian Forty (3) who declares that design's role can be clarified, albeit in a somewhat mechanical way, by reference to the structuralist theory and its emphasis on the invention of myths. Communication theory and semiotic theory, based on the principles of structuralism, aim to clarify the relationship between objects and meanings, referring to the way the human mind relates to things. Meaning,

being of great importance to the perceptual process, is regarded in this study as someone's cognitive creation for understanding an object and not as the property of an object or an element itself.

Product semantics is the part of semiotics that deals with the significance and the content of designed objects and the symbolic qualities of the form of products within the social and cultural context of their use. Semiotics and product semantics are used by many scholars such as Eco, Barthes, Krippendorff, Butter, Jencks, Bonta and others to investigate the network of material culture as it is developed by a continuous process of communication between various individuals or groups. Peter Dormer (4), although he accepts the utilitarian argument for product semantics - making a thing easier to use - as a good thing, questions the 'science's' capacity to identify bigger issues in design. He argues that most of the product semantics practitioners employ a language that is a pastiche of the scientific and use product semantics only for commercial reasons (5).

The present investigation concentrates on visual communication, examining it as a code and elaborating on the similarities with, and the differences from verbal communication. Although the theoretical background is mainly based on the work of Daniel Miller, Peter Dormer, Donald Norman and Adrian Forty, the analysis is based on semiotics and product semantics for the understanding of designed objects in accordance with a specific context and a layer of cognition.

### **3.1 On Communication.**

#### **3.1.1 Communication and Signification.**

Speech and written language were used in the present research as the means of communication between the researcher and the subjects for the definition of materials, colours, and textures relating to both the office and the sharing of information.



'Communication' is the process of sharing information between a source, that creates and transmits a signal, and a perceiver. The communication between the two parts was completed with some of the addressees, i.e. those who actually responded to the questionnaire. Those who did not respond left the communication process incomplete. So the necessary part in any communication process is a perceiver who responds to the transmission of information (6). The neutral transmission of information, where a recipient and/or the impact of the message on him are indifferent, can be defined as *signalling*(7). When an interpretive response is aroused in the addressee at the perception stage, a signal is not regarded as a mere stimulus, but as a *sign* (8). The communication model consists of four principal components in linear sequence: the creation of a signal, (i.e. the questionnaire), its transmission, its perception by a recipient, and the response to it.

Speech is the main system of communication common to all human societies. Words are the elements of language which represent things and concepts, but they are empirical signs, not copies of anything (9). They are used to transmit thoughts according to agreed transformations. These agreed transformations, by which messages are converted from one set of signs to another, are defined as *codes* (10). Codes are the rules of signs in communication (11) and make the indirectly perceptible, such as concepts, representable by the directly perceptible, such as words. Due to this indirect transmission a relative objectivity characterizes speech and especially concepts: comfort, austerity, openness and complexity are some words used in the study that represent similar, but not necessarily exactly the same, concept to everyone.

The process by which perceived information is codified, is termed as *signification*. All communication is part of a signification process, but the converse is not necessarily so (12).

*Semiology* deals generally with signification systems. It was conceived by

Ferdinand de Saussure, who saw it as the study of the life of signs in society. The American C.S. Pierce, a contemporary of de Saussure, conceived a theory of signs, which he called *semiotics* (13). Semiotic theory is applied to various codes other than linguistics. The semiotics of design deals with the signification of designed forms.

C. W. Morris, following Pierce, divided semiotics into three parts in accordance with the rules of signs: *syntactics*, *semantics* and *pragmatics*. *Syntactics* is the study of the relationship between signs, *semantics* is the study of signs in relation to their meanings, and *pragmatics* is the study of the interaction between the user and signs and their significance (14). *Meaning* and *Significance* are central aspects of this study and therefore reference to semiotics, and especially semantics, could provide the strategies for the development of a method of investigation.

### **3.1.2 Verbal and non Verbal Communication.**

People communicate not only by spoken or written language, but also by other forms of communal interaction such as gestures, facial expressions, postures, social formalities, good manners, music, team games, and road signs. Non-verbal channels of information can be regarded as 'languages' in the sense that they are codes or signification systems learned and shared by the members of a communicating group. These forms of human communication with the man-made environment is the subject of the present investigation.

Saussure considered the whole phenomenon of language in terms of two fundamental dimensions: that of 'langue' and that of 'parole'. An adequate translation into English is 'language' and 'speech'. A 'language' is both a social institution and a system of values. It is a collective contract which the individual cannot create or modify, and which he must accept in order to communicate. 'Speech', on the contrary, depends on individual selection and use within the language. It is a way of expressing personal thoughts (15). Geoffrey Broadbent (16) draw parallels between the dimension of



'language' and that of 'style' in architecture and design, stating that style is also a contract between people because they associate the same meanings with certain elements of design and architecture. Like language, it comprises a set of rules for the use of those elements. On the other hand, an individual has a certain freedom in the way he puts the various elements together. This freedom of choice is the 'speech' in architectural language.

On the same subject, Barthes (17) associates the garment system and the furniture system with 'language'. He suggests that the stylistic varieties of a single unit form the *language* and the juxtaposition of different pieces form the *speech* in these particular categories. An object obtaining its meaning by being related to its context becomes a significant unit and part of a communication system. Arnheim states that an object is always an object in context. To see the object means to separate its own properties from those imposed upon it by its setting and by the observer. 'To see means to see in relation' (18).

Non-verbal forms of communication fall into three distinct categories according to Ruesch's approach (19): *sign language*, which includes all those codes in which words, numbers, and punctuation have been supplanted by gestures; *action language* includes all movements not used exclusively as signals; *object language* comprises the display of objects. Ruesch believes that although the non-verbal codes differ from each other, they can nevertheless be considered together for comparison with verbal codes, with reference to general, spatiotemporal and semantic characteristics.

The objects referred to in the third category- office furniture is a relevant example - are often used intentionally as communicative devices to convey meanings recognised within a community group. Written material on papers or screens, furnishings, service desks, chairs, machines, architectural and decorative structures, and the clothing of the human body, are parts of the object language in a bank. It is difficult to separate the symbolic qualities of objects from the functional ones, even in utilitarian objects, because

even purely functional things identify a person with a specific way of life, acting as representative signs of that way of life (20). Additionally, objects, because of their material substance, facilitate the organising, taxonomy and shaping of abstract characteristics in one's personal life. They are often used by individuals to associate with, or differentiate from other social groups and obtain symbolic qualities even when not used as mere symbols, but as functional units. Furniture and interior decoration represent this attribute at its best. This is strongly believed by the majority of the study subjects, who stated that the form of the working environment not only expresses and advertises the image of an organization, but it can also act as a means of more positive behaviour towards the company<sup>1</sup>. This created a trend recently for the use of comfortable, quality furnishings in spacious and carefully coloured offices in an attempt on the one hand to gain customers and on the other to improve employees' efficiency. Mental satisfaction and comfort of the body are greatly appreciated nowadays by those working in the services sector.

### **3.2 Meaning and Office Furniture Products.**

#### **3.2.1 The Meaning of Objects in Human Social Life.**

Every man-made form is part of a sociocultural context and is therefore loaded with social meanings. Additionally, its meanings are determined by social conventions. According to Peter Dormer (21) "we gain our values and meaning through the variety of communal and corporate activities; we derive consolation and pleasure through the pursuit of 'ends in themselves'<sup>2</sup>. We celebrate our institutions and their values through ritual,

---

<sup>1</sup>2nd questionnaire, 4th question: To what extent, in your opinion, does the design of the working environment: a) affect the decision of bank customers to deal with your bank? b) express and advertise the image and the character of a financial organization?

<sup>2</sup>Peter Dormer uses the term 'ends in themselves' for those experiences that are not dependent upon the notion of purpose: "To ask what the point is of the love you feel for your child is, in practical moral terms, a meaningless question. The emotion of belief in or commitment to or involvement in those things which we can call 'ends in themselves' rebuff scepticism by rendering the sceptic's question itself as



through decoration, through their symbolic elaboration in artifacts and architecture. Our institutions are sources for symbolic meaning".

People base their knowledge, experience and information about their environment on objects, that consequently determine their past, present and future attitudes towards patterns of life. Spatial position as well as temporality are intrinsic properties of any object (22). Objects, i.e. artifacts as products of human labour and not natural objects (23),- are intentional and therefore significative, associated with symbolic qualities heavily dependent on the context of use. Although objects have a function that imposes certain constraints on their form, social rather than functional considerations define their form. The variety of forms that can be justified functionally for a particular product -e.g. a chair, support this point of view (24).

A large part of the pilot study concentrated on the correlation between material properties of objects and concepts<sup>3</sup> in an attempt to investigate the meanings people pointless. Some obvious ends in themselves include: interesting work, gardening, sport, companionship, listening to stories- and trying to find out how quarks work."

<sup>3</sup>1st questionnaire: 13th question: Which of the following concepts and attributes have been reflected in the form of your products during the periods 1970-1975, 1975-80, 1980-1985, 1985-1990? (Luxury, Comfort, Status, Durability, Functionality, Flexibility, Individuality, Informality, Relaxation, Austerity, Innovation, Others).

16th question: When did you change your products' appearance during the last 20 years and why?

2nd questionnaire: 10th question: Please indicate, by ticking one of the nine steps of each scale, the means by which you differentiate the working environment of employees of different hierarchical levels. (Space, Space flexibility, Privacy, Luxury, Comfort, Furnishings, Technological means, Personal objects, Surroundings, Colours).

11th question: Which of the following statements represent best your policy, as far as the design of the working environment is concerned? (open space arrangement, semi-private working areas, private working areas, service desks with glass protection, service desks without glass protection, low-height service desks, 'fine' textures, rough textures, shiny surfaces, matt surfaces, comfortable armchairs in waiting areas, writing desks for clients, readable signage). Please indicate which of the following concepts are, in your opinion, reflected by your policy? (Friendliness, Austerity, Sobriety, Authority, Rationality, Stability, Flexibility, Impersonality, Independence, Individuality, Openness, Consistency, Affluence, Comfort)

give to objects. Concepts such as friendliness, austerity, sobriety, authority, rationality, stability, flexibility, individuality, openness, consistency, affluence, comfort, status, durability were chosen because they are often discussed in relation to the office and the working environment.

A characteristic of some products in the office is their use as status symbols. Though this characteristic is common to every culture, the products that act as status symbols, and the meanings associated with them, vary. In the contemporary office environment, wood and leather seem to confer status. Dark colours, complexity of form and craftsmanship also confer status<sup>4</sup>. Status is a form of power (e.g. wealth, political power, talent, physical strength), that attracts the respect, the envy and the consideration of the members of a society. As such, it forms a target in that particular society. The quest for status of individuals and organizations fluctuates in relation to other social factors. Socioeconomic insecurity during the last twenty years has stepped up the search for status<sup>5</sup>. For some people the mere possession of a status symbol associates its owner

---

12th question: Which colour ranges do you usually choose for the working environment and the furniture of your Bank?

18th question: Please indicate, which of the indicated means - steel, aluminium, other metals, wood, laminates, leather, fabrics, plastics, glass - are, in your opinion, related to concepts such as Friendliness, Austerity, Rationality, Individuality, Affluence, Comfort, Durability.

19th question: Which of the following characteristics - Combination of materials, Limited number of materials, Rounded shapes, Sharp edged shapes, Simple forms and design, Complex forms and design, Symbolic forms, Technological effects, Minimised dimensions, Maximised dimensions, Fine textures, Rough textures, Shiny surfaces, Matt surfaces, High tech, Low tech, Futuristic, Sophisticated, Light construction, Heavy construction, Craftsmanship, Others - represent best the form and the design of the furniture and equipment of your branches? Please indicate which of the following concepts are, in your opinion, reflected by your characterization? (Friendliness, Austerity, Sobriety, Authority, Rationality, Stability, Flexibility, Impersonality, Independence, Individuality, Openness, Consistency, Affluence, Comfort).

<sup>4</sup>1st questionnaire, 14th question: By which of the indicated means - colours, materials, textural attributes, dimensions, form and shape, construction - have the following concepts and attributes been reflected in your production? (Luxury, Comfort, Status, Durability, Functionality, Flexibility, Individuality, Informality, Relaxation, Austerity, Innovation, Others)

<sup>5</sup>1st questionnaire, 13th question: Which of the following concepts and attributes have been reflected in the form of your products during the periods 1970-1975, 1975-80, 1980-1985, 1985-1990? (Luxury,



with superior qualities without the need to prove these qualities. We recognize the branch manager of a bank as a man sitting in a high-backed leather chair in a private place behind a big desk of dark wood and of quality craftsmanship without any further proof of his identity. Thus, products confer status or other virtues on the bearer, and are used not only to reflect reality, but also to bring this reality about.

Furthermore, Miller (25) states that certain products become so firmly associated with an individual that they are perceived as extensions of him; in some societies, clothing, ornaments and tools are considered to be an integral part of the individual and to touch or harm them is indistinguishable from taking the same action against the person who owns them. Thus, one can maintain or even gain status by the successful manipulation of symbols, which in the office are space, privacy, and comfort. This fact gives objects a great importance in their participation in social life. This explains why the concept of property brings so closely together 'being' and 'having' (26). A relevant example is the car, an object extensively used in contemporary society as a status symbol.

It is relevant to mention here Adrian Forty's comments on the relationship between design and myth as a cultural phenomenon. According to him, "design has the capacity to cast myths into an enduring, solid and tangible form, so that they seem to be reality itself"(27). He argues that nowadays myths are used by entrepreneurs for commercial success, giving the example of the modern office and the common assumption that modern office work is more friendly, more fun, more varied and generally better than it used to be. This myth serves to reconcile people's experience of the boredom and monotony of the office work with their wish for fun and excitement. Modern equipment in bright colours and humorous shapes are used to sustain this myth and help make the office match the myth (28).

Products, by being able to express prestige and power, become means a of  

---

Comfort, Status, Durability, Functionality, Flexibility, Individuality, Informality, Relaxation, Austerity, Innovation, Others)

individual differentiation. However, their social significance depends upon the existence of a group that believes in their importance. The need for differentiation of the self through the products one possesses and for individuality is an essential factor in the design and manufacture of products in our service-orientated society. Individuality, as opposed to impersonality, is much appreciated as characteristic of an office<sup>6</sup>. It is associated with fabrics, leather and wood, materials that are components of craftsmanship<sup>7</sup>.

The need for individuality led to a design approach which manipulated form in order to evoke connections with the subject by the use of metaphorical symbols. This visual language is used to create meaning from technology and to reconcile impersonal products with the need for personal expression and individuality. Customising reflects this attitude in the mass market. In a similar sense, the first products of the industrial society were manipulations of form which alluded to preindustrial metaphors. A relevant example is that the early radio cabinets used the forms of traditional furniture to hide the assemblies of technical apparatus. Products of the Depression period expressed a more emotive, daring aesthetic. However, when technology and manufacture as signifieds of an object become "reified as having a separate and particular connotation, it is not the actual process of manufacture which is of importance but the ability of the object to stand for a particular form of production and its attendant social relations" (29).

---

<sup>6</sup>2nd questionnaire, 8th question: To what extent should the following concepts be expressed by the working environment of a bank according to the broad philosophical notions of your bank? (Friendliness, Austerity, Sobriety, Authority, Rationality, Stability, Flexibility, Impersonality, Independence, Individuality, Openness, Consistency, Affluence, Comfort)

<sup>7</sup>1st questionnaire, 14th question: By which of the indicated means - colours, materials, textural attributes, dimensions, form and shape, construction - have the following concepts and attributes been reflected in your production? (Luxury, Comfort, Status, Durability, Functionality, Flexibility, Individuality, Informality, Relaxation, Austerity, Innovation, Others)

2nd questionnaire, 18th question: Please indicate, which of the indicated means - steel, aluminium, other metals, wood, laminates, leather, fabrics, plastics, glass - are, in your opinion, related to concepts such as Friendliness, Austerity, Rationality, Individuality, Affluence, Comfort, Durability.



### 3.2.2 The Notion of Meaning.

The research in the previous chapter was based on a combination of communication systems, visual and verbal, between the author and the participants. *Meaning* and *Significance* were of major importance in the research. To achieve valid results, phrases and terms needed to have the same meaning for all of the subjects. Thus, a high level of objectivity of the questionnaire's context was necessary. Though the linguistic clarity of a phrase or a text was achieved through the correct and relatively objective use of language, the study findings made obvious that the meanings of forms, objects or environments are unavoidably more dependent on subjective factors. Question 18<sup>8</sup> of the second questionnaire is a relevant example: The word *leather* characterizes the same material in every language, social group and culture; but the concept associated with it seems to be quite different judging from the opinion of the public. 60% of the Italian sample think of it as austere, while only 10% of the British sample have the same opinion. 100% of the British sample, 67% of the German sample and a 67% of the Greek sample associate it with affluence, but the Italian and Spanish samples disagree (0%). Even its durability is under question as only 10% of the British sample believe in that, compared with 44% of the German sample. Glass meets the same contradiction: 50% of the Spanish sample associate it with affluence, as against none for the Greek and only 10% for the Italian. Are there major cultural differences between these three peoples? Is glass traditionally important, or is it really expensive in Spain to explain this difference in meaning? The sociocultural and economic characteristics of the particular countries investigated may account for these differences.

Little is known about the human cognitive aspects that make environmental information understandable and meaningful, because only hypotheses sustain the various approaches. Meaning is of great importance in the perceptual process (30). However, the

---

<sup>8</sup>2nd questionnaire, 18th question: Please indicate, which of the indicated means - steel, aluminium, other metals, wood, laminates, leather, fabrics, plastics, glass - are, in your opinion, related to concepts such as Friendliness, Austerity, Rationality, Individuality, Affluence, Comfort, Durability.

findings of this study lead to the conclusion that meaning is not the property of an object or an element itself, but rather someone's cognitive formation for understanding an object. Meanings may or may not be held in common by human beings with reference to a particular element. Thus, vocabulary associating forms with meanings is much more imprecise than a linguistic one.

Meaning of forms and materials is accepted here as the outcome of cognitive processes that depend either on the knowledge of a cultural or social system, or on associations of any kind. For example, a service-desk or a computer become meaningful only to those familiar with their use. This meaning can be called conventional and both objects are symbols of office work. An example<sup>9</sup> of associative meaning is the relation between feelings and senses that leads to meaning; fine textures, matt finishes and fabrics are best in expressing "smooth" (that could be interpreted as gentle, discreet, friendly, personal) behaviour. This 'smoothness' is greatly appreciated in contemporary society as a concept expressed by material things.

Meaningfulness of a product is closely connected with its understanding and therefore with practice and experience, but it is much more than a matter of understanding function. It is created out of an interaction of people with their particular environment and context through cognitive connections of actions and perceptions. Meaning is the symbolism we attribute to objects. Objects signify various things, not only about themselves, but about the larger context of their use to anyone who forms a particular

---

<sup>9</sup>2nd questionnaire, 11th question: Which of the following statements represent best your policy, as far as the design of the working environment is concerned? (open space arrangement, semi-private working areas, private working areas, service desks with glass protection, service desks without glass protection, low-height service desks, 'smooth' textures, rough textures, shiny surfaces, matt surfaces, comfortable armchairs in waiting areas, writing desks for clients, readable signage). Please indicate which of the following concepts are, in your opinion, reflected by your policy? (Friendliness, Austerity, Sobriety, Authority, Rationality, Stability, Flexibility, Impersonality, Independence, Individuality, Openness, Consistency, Affluence, Comfort)

2nd questionnaire, 18th question: Please indicate, which of the indicated means - steel, aluminium, other metals, wood, laminates, leather, fabrics, plastics, glass - are, in your opinion, related to concepts such as Friendliness, Austerity, Rationality, Individuality, Affluence, Comfort, Durability.



relationship with them according to the conceptual connection he is able to develop.

The interaction of visual aspects and conceptual connections one develops leads to a meaningful result. Associations with one's experience and knowledge make things meaningful. People seem to function through the use of two kinds of knowledge: the *declarative* and the *procedural* (31). *Declarative knowledge* is the knowledge of 'what', the knowledge of facts and rules and is easy to write down, or to teach. *Procedural knowledge* is the knowledge of 'how', the knowledge that enables a person to perform music, to stop a car smoothly with a flat tyre, etc. It is difficult or impossible to write down and difficult to teach. It is best learned by practice and experience and taught by demonstration, and it is largely subconscious. Knowledge in the human mind (*internal knowledge*) is transformed to memory. It is thought that information which is regarded as meaningful becomes memory only after interpretation. There are a number of categories concerning the way people use memory and retrieve information. Three of them are relevant to design and objects (32): *Memory for arbitrary things* that have no relationship to one another or to things already known. *Memory for meaningful relationships* which are formed by items with themselves or with other things already known. In this way, new information is understood, interpreted and integrated with previously acquired material. *Memory through explanation*. In this case, the explanation mechanism is the fundamental element while the material is not important. People understand the world, learn and remember through explanations and interpretations of events. Memory and thought are closely related because both rely upon experience from life. Besides knowledge in the human mind (*internal knowledge*), *external knowledge*, i.e. the information that resides in the world, plays an important role in people's daily functioning in society. For example, 'signage' is very important in the design of a bank interior<sup>10</sup>.

Much of people's knowledge is inaccessible to conscious inspection and therefore much of human behaviour occurs subconsciously. The subconscious process assists in

---

<sup>10</sup>2nd questionnaire, 11th question

detecting generalizations and connecting new with old experiences but it is not capable of reasoning through a sequence of steps. On the other hand, conscious thought, though slow and limited, offers alternatives and comparison of different choices (33). The first part of the pilot study<sup>11</sup>, and especially the correlation of concepts with material things, showed that the majority of the manufacturers of office furniture follow trends based on a subconscious reading of the demands of the market. Only very few seem able to consciously deal with the subject, and analyse tendencies and theoretical issues. Though conscious thought is not always the recipe which leads to commercial success, it seems that recently the demands of the mass market are not easily interpreted only by an open minded person, but detailed research becomes necessary to deal with the increased number of influencing factors and cultural differentiation.

Perceptual properties, and especially visual clues, are used in this study by people to access the meaning of objects. Perceptual properties seem to act as codes to classify an object. The human mind links concepts to real world objects, and meanings are developed by the way various concepts are linked to each other. Things become meaningful as a combination of various constraints lead one's mind to meaningful outcomes by limiting the possible alternatives. Four categories of constraints can be distinguished (34):

The *Physical constraints*, i.e. the physical limitations of objects that constrain the possible operation and define a limited number of actions and interpretations. For example the height of a service desk constrains its use as a seat.

The *Semantic constraints* refer to the meaning of a particular situation that limits physical action. These constraints rely upon our knowledge of the situation. For example, even when there is easy access to the back of the service desk, no client encroaches because the particular space has its own meaning, which is known and respected.

The *Cultural constraints*. There are rules and conventions within a culture that influence behaviour and interpretation of situations independent of the physical or semantic limitations. For example, not speaking loudly in a bank in the Western world is a result of

---

<sup>11</sup> 1st questionnaire, 13th, 14th question



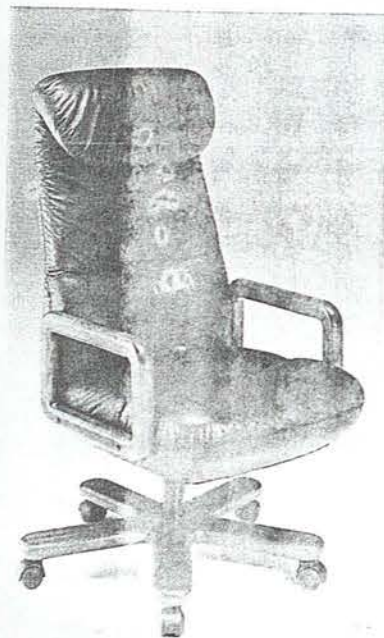
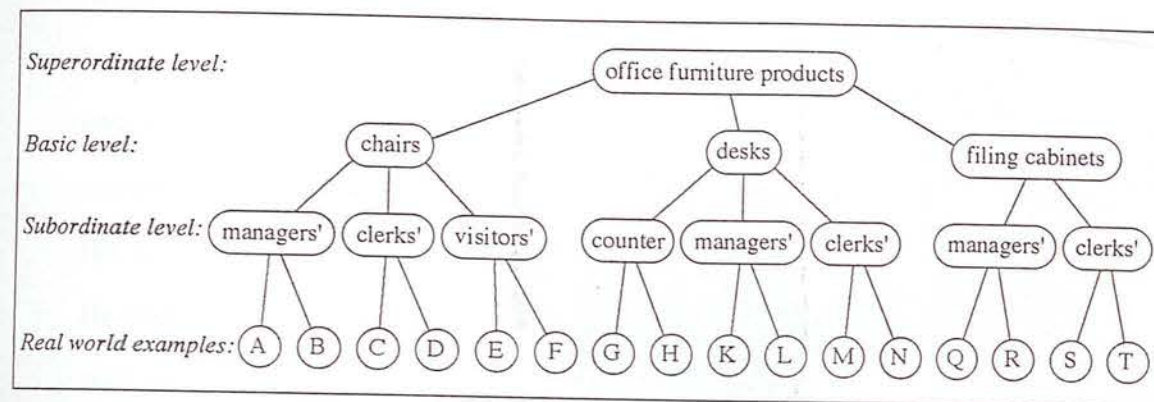
social rules people learn and use. Similarly, a bank manager without a tie creates confusion in his environment, while the same would not attract attention in Greece.

The *Logical constraints* act as indicators based on logic, having a natural relationship to the spatial or functional layout of the system. For instance, the logical outcome of glass protection of service desks is that besides sight and sound, any other kind of communication is undesirable. This process gives objects their identity and is a potential source of new visual clues and semantic devices. Additionally, the human mind seems to cope with new information by referring to categories of objects rather than individual units, and people develop rules concerning ranges of objects in order to categorize them. *Categorization* is essential in cognition in reaching conclusions about the environment (35).

According to Athavankar (36), human concepts do not exist independently as real world objects do, but the mind treats them as parts of *basic level concepts* as well as of *superordinate concepts*. The latter are outcomes of the human mind. For example, a counter desk of a bank belongs respectively to a *basic level* of desks and a *superordinate level* of office furniture products. [table 2] The links between the levels are expressed by using semantic devices from within the *superordinate level*, thus maintaining the identity of the category. At the same time, secondary links with concepts deriving from the cultural scheme outside the primary category are established, which give the form of the product flexibility for more subjective interpretations as well as individual identity. As a result, multiple meanings are connected to this process more effectively. Some products belong to two *superordinate* categories. For example, a desk-light is to office equipment as well as a lighting device. Although in compound concepts the form of a product is motivated by all the correlating independent concepts, there is always a primary connection to one category of objects. Otherwise, the product is incomprehensible and additional explanations (e.g. linguistic signs) are necessary for its use. For example, touch screens in ATMs (Automatic Transaction Machine) in banks have no other indication than written directions on the screen on what part of the screen one should touch to use the machine and start the process of transaction.



Table 2: Mental world concepts.



A B



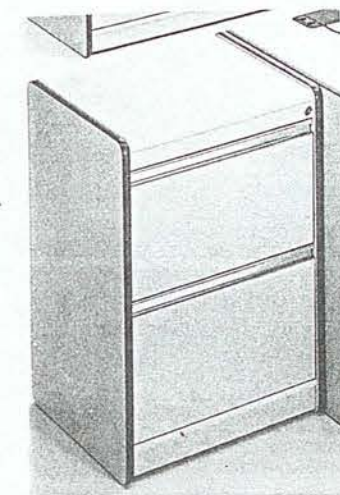
F



C D



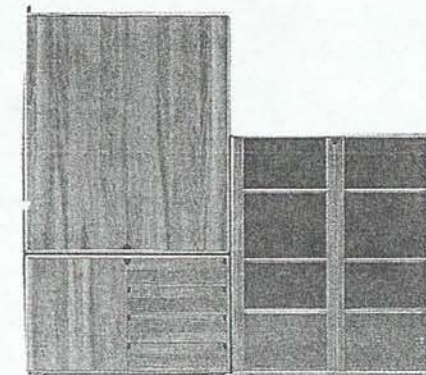
E



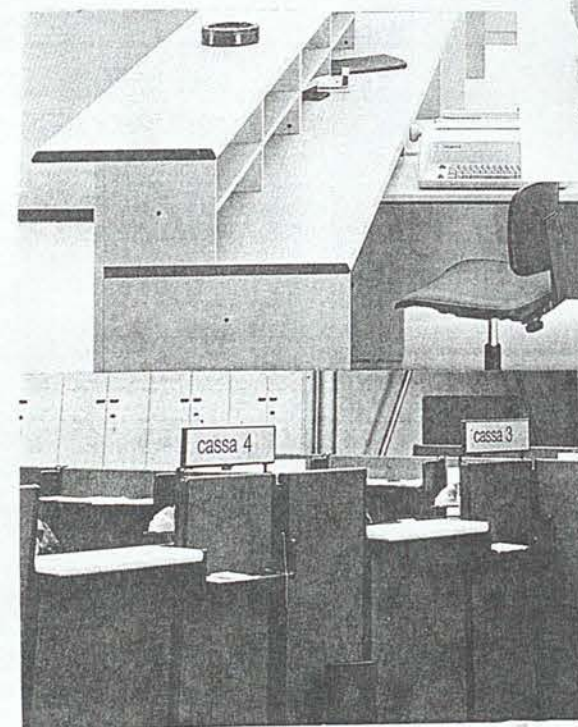
S T

Q

K L



R



G

H

M

N





Appearance is a significant factor in designed objects because it is the main means of categorization and forming of associations in the human mind. Manufacturers of office furniture products now attach greater importance to appearance than a decade ago, changing the form of their products<sup>12</sup> within a period of three years. Their major concern is to catch up with the changes in the life-style of their target group, interpreting the market tendencies of the second half of the 1980s as a demand for functionality, flexibility, innovation, status and comfort. They try to satisfy changes in the needs, as well as technological change, improvement of quality and so on, through changes of the form, associating concepts with substance. For example, they use fat forms, rounded shapes and pastel colours to project friendliness and provide various accessories and permit choice of finishes and details to satisfy demand for individuality.

The 1980s witnessed a revival of symbolism and metaphors in architecture and product design. Post-modern design is based on symbolism and very often organic forms are also used as expressive means of metaphors. The objects of fig. 11, 12, and 27 are representative examples of this tendency. The *Tankette* table of fig. 11, in the form of a tank, uses a symbolic form to express an ironic message of cultural criticism. Similarly ecological message is expressed by the experimental forms of Horak's sofa in fig. 12. The use of organic, symbolic forms is represented in the *Butterfly* desk by Tressera (fig. 27). Symbolic and metaphoric styling became an important factor in product differentiation, communicating values shared by the consumer. Peter Dormer (37) explains this tendency as a psychological need among some designers to provide complicated meanings as a framework for their work and justify themselves creatively, resisting to compromise their role in order to serve the manufacturers. Thus, "the post-modern designer opposes anonymity and mystery, he and she oppose objecthood and

---

<sup>12</sup>1st questionnaire, 7th question: How far in the future do you plan your production for? (1-3 years, 3-5 years, 5-10 years, 10 years or more)

1st questionnaire, 16th question: When did you change your products' appearance during the last 20 years and why? (To use new technology in manufacture, To launch an innovative product, To adjust your production to new tendencies, To alter products due to economic conditions, To match the change in your target group demands, To improve the quality of your products, For another reason)

praise clear subject matter, story telling and openness. The object is replaced by the word" (38). Designing by gender is an outcome of this tendency, as well as hand-produced objects that make a virtue of 'imperfection'. These hand-produced objects, such as ceramics, glass and furniture offer the luxury of differentiation and imperfection, in contrast to products designed for efficiency and safety. The success of the crafts in the 1980s rests in the general set of metaphors about the kind of labour that produced them, the way of life that produced them and a visual language that is easily understood (39).

In modern society, the office is as important as the home. It is the lively cell that for half of the day dominates the lives of many people. Categories within this area are determined by the professional activities taking place, which correspondingly determine the form of each interior. The bank is a category that has specific characteristics of abstract and material substance, that become comprehensible through sociocultural conventions (i.e. external knowledge). This knowledge defines the meaning of a bank as the place for a money-dealing service in the economic system of the western world.

In the human mind, a category seems to be developed around an abstract ideal, characterized by the perceptual features most often met in the category (40). This perception is influenced by cultural schemes and external social factors such as availability in the market, marketing, and media coverage that assist new inputs in the category. In spite of changes, there is always a certain level of continuity within a category, which together with a tendency for visual change, ensures a comprehensible development of product forms.

According to the findings of the research, the abstract ideal in the category of contemporary bank interiors is characterised<sup>13</sup> by clarity, comfort, permanence,

---

<sup>13</sup>2nd questionnaire, 9th question: Please characterise by ticking one of the nine steps of each scale, the working environment of an average branch of your bank. (simple - complex, rational - intuitive, ambiguous - clear, plain - ornate, confined - spacious, permanent - temporary, Uncomfortable - comfortable, straightforward - contradictory, passive - active, unique - common, exciting - calming,



straightforwardness, activity, openness, orderliness and consideration. The environment is situated half way between the axes: simple - complex, rational - intuitive, plain - ornate, confined - spacious, unique - common, exciting - calming, interesting - boring, tight - loose. Differences around Europe arise from cultural differences and attitudes toward work and human communication. For example, Greek and British working environments are seen by their users as more simple, rational, distinctive and tranquil, Spanish ones as more interesting, Italian as more austere and tranquil, and German ones as more spacious and interesting. These perceptions refer to equipment, furniture, decoration and space arrangement and provide an example of how humans view the world through categories.

### **3.3 Design of Products as a Signification System: Product Semantics.**

#### **3.3.1 Codification in Design.**

In design, *semantics* deals with the significance and content of designed objects. Design as a signification system has been discussed for more than twenty five years, but it is still characterized by many ambiguities and different approaches. Semioticians, like Eco, try to apply their theories to specific fields such as design and architecture, while architects and designers, like Jencks and Bonta, try to find a theoretical basis in semiotics for their approaches to design. In parallel, some other designers and critics, like Baker, call into question the whole subject of meaning in design as being far too 'abstract and esoteric'.

Design as a cultural phenomenon is based on communication and signification. The communication model, which consists of four elements in linear sequence (i.e. creation of a signal, transmission by a transmitter, perception by a perceiver and response to it) can also be developed with reference to design of products. In this case the communication between the transmitter and the perceiver, i.e. the designer and the user, is not a simple

---

interesting - boring, open - closed, chaotic - ordered, tight - loose, considered - arbitrary)

and direct one because of the various external circumstances in society, contracts between people, ideologies and market systems that create flexibility in communication models. Thus, codification in design is much more imprecise than in other forms of signification systems and the 'language' of design changes much more than the verbal one. While each verbal language is a code in itself, the information content of design-objects is the outcome of various codes (some of them external to design), the correlation of which comprises the language of design. Parallels in absolute terms cannot be drawn between verbal language and codification in design.

Relations between the syntactic and the semantic elements in design are less permanent and less conventional than in verbal languages. Therefore the analogy is metaphorical and has no practical use (41). Levels of codification in design could probably be related to different groups of design objects and processes. Additionally, different readings of the same thing by different perceivers, or a variety of readings in the course of time related to one and the same form or object or process, could be discerned. For example, the industrial appearance of the office at the beginning of the century signified better conditions of work whereas today great spaces are avoided because employees work better in a friendly home-like environment.

There are serious differences between scholars concerning codes in design. Various analyses of design codes (42) such as: *Technical codes* (dealing with articulations of design engineering), *Syntactic codes* (concerning articulation into spatial types), *Semantic codes* (concerning the relations established between individual design sign-vehicles and their meanings), are considered to be limited in operational possibilities because they do not give one the freedom, as verbal languages do, to deal with unexpected situations. According to Eco, the solution that gives design codification the necessary flexibility is the one which accepts that design is based not only upon its own code but also upon external codes that make the messages meaningful. The elements of design are a system but become a code only when they are coupled with systems outside design. This does not deny the communicative nature of design and is supported by the



designer in practice, who acts as a sociologist, a psychologist, an anthropologist, and a semiotician.

The findings<sup>14</sup> of the study support the above; the subjects confirmed there is a close relation between the form of office furniture and the economy, media, technology, politics, sociology, and psychology. Communication of a message in design is not always consciously intended, though design products always signify something. Objects do not only promote the function to be fulfilled, but beyond that they signify the possible function, as well as various concepts and attitudes associated with them.

Product semantics is concerned with the meaning of objects in accordance with the context and the layer of cognition. It was introduced as a term in the 1980s to define the area of research that uses semiotics to analyse problems and phenomena related to meanings in product design and to assist in the examination of manufactured objects as signifiers. However, a successful application of product semantics presupposes a method of approach that would cover most of the variables that determine a product's significative and communicative aspects, taking into account the unlimited inputs into the system.

According to Krippendorff and Butter (43), the channels through which messages are communicated are: *Information displays* (e.g. screens, loud speakers, moveable signboards), which operate outside product semantics and the designer is only concerned about the interface of the displays and the user. *Graphic elements* (e.g. labels, colour codes and written instructions), which are attached to the product's surface and convey

---

<sup>14</sup>1st questionnaire, 5th question: To what extent, in your opinion, do the following factors influence your production? (National economy, International economy, Oil crisis, Politics, Government policy concerning manufacturers, Government policy concerning middle class income, Government policy concerning upper class income, Mass media, Other countries production similar to yours, Technological evolution, Architectural tendencies, Design tendencies, Others)

1st questionnaire, 18th question: How influential in your opinion, are each of the following factors on your consumers' taste? (Mass media, Individual Designers, Fashion, Class, culture or group standards, Change in practical needs, Change in psychological needs, Others)

meanings not indigenous to the product but linguistic signs. *Product's form, shape, texture*. These are indigenous to the object and their symbolic meanings are characteristic of product semantics. *Indications of a product's internal status*. These show the particular operating conditions of a product while in use and inform the user of how the product works without dismantling it.

Product semantics is concerned with the logic of information provided about the construction and internal functioning of products. Krippendorff (44) evaluates a model of three classes common to all design activities that could provide a basis for a semantic approach to products if further developed: the *Descriptive class* (that explores people's understanding of things and the cognitive strategies used in the everyday interaction with objects), the *Anticipatory*, or *Interventive class* ( that deals with any possible changes in the understanding of things by a new design) and the *Creative class* (that deals with the ways artifacts embody semantic devices).

### **3.3.2 Syntagmatic and Associative Relationships in Design.**

Saussure, basing his semiotic theory on pair concepts, introduced 'syntagmatic' and 'associative' relationships. Barthes (45), among others, suggested the term 'systematic' instead of 'associative'. 'Syntagm' for de Saussure is a combination of signs which has space as a support. For example, the contemporary banking environment is characterised by the use of items such as computers, cash register machines, service desks, counters, chairs for the employees and for the public, and filing cabinets. These items comprise the syntagm, or the 'speech' of a bank interior. 'Associations' are items associated in memory as having something in common. 'Associations' are related to 'language' as a system, while 'syntagm' is nearer to 'speech'. Each of the above mentioned items is associated with various others that have the same function, though a different form. The associated items are held together in memory because of a common feature. For example, chair is a category of associated items that form a 'language' around the most common features of the various examples: a horizontal surface for sitting, supported at a level



above the ground by three or four legs, or a wheeled structure, and possibly a back support. The various items of the category are identified by the shape, the dimensions, the materials, the texture of the materials, the weight, the colour, and the accessories. Each one of those signifies a number of concepts such as friendliness, luxury, functionality, flexibility and possibly participates in a communication process. For example, the high back of a chair signifies luxury and comfort and therefore, it usually means (communicates the meaning) that it is used by an executive.

### 3.3.3 Signifiers and Signifieds.

In verbal language, *associative* relationships as well as *syntagmatic* ones refer to words and to the things they stand for, i.e. their referential meaning. The correspondence between a word and a concept or a thing comprises, according to Saussure, a 'sign' and most of the times it is entirely arbitrary. A sign consists of a 'signifier' and a 'signified' (46). Their relation in verbal language is conventional as it is based on a preconceived agreement between users.

The *signifier* is a relatum and a mediator. Its substance is material; it can be a sound, an object, or an image (in other signification systems). The *signified* is a concept; it is the mental representation of the thing, not the thing itself (47). Signifiers, i.e. the conveying system, constitute a plane of *expression* while signifieds constitute the plane of *content* (48). Any correlation of an element of an *expression* plane to one or several elements of a *content* plane, recognised by a human group, gives rise to the existence of a sign. Consequently, the correlation of an *expression* plane to a *content* plane is established with the existence of a code. *Form* and *substance* characterize both planes of a signification system. The notion of substance is particularly ambiguous, especially on the plane of content. While on the plane of expression substances are material, depending on the form (e.g. sounds, lights, lines on paper), on the plane of content they depend on linguistic form.

In this study it was found that users, designers and manufacturers subconsciously used a code to signify certain concepts they regard as desirable. Thus, in the office environment, wood and leather are regarded as *signifiers* correlated to *signifieds* such as the concepts of status and luxury. The code in use is the outcome of various codes, some of them external to the design process. Wood and leather are high value materials that require skills in their processing, which are at a premium in contemporary society. Thus, they can be purchased only by the minority who can afford them.

C. K. Odgen and I. A. Richards, in their work 'The Meaning of Meaning', recognize, like Pierce, the three-sided nature of the signs. According to them, the meaning of a sign can be discussed only with reference to some specific user because the sign can mean different things to different people. They developed the *Symbol - Reference - Referent* triangle. Jencks (49), among others, tried to apply the above theory to design, seeing form as signifiers (e.g. materials, enclosures) to articulate signifieds (e.g. ways of life, values, functions), and making use of certain means (e.g. structural, economic, technical and mechanical). Moreover, Eco, commenting on the triadic nature of the sign in the fields of design and functional objects, questions the definition of the *Referent* in the particular system, arguing that it should be seen as the object of sciences (e.g. physics, bionics).

### 3.3.4 Physical and Significant Forms.

Bonta applied the theory to objects (50), according to whom an object has two types of form. He calls one 'physical form' and the other 'significant form'. The *physical* one encompasses all the features directly or indirectly perceptible, such as smell, sound, shape, mechanical properties, and temperature. The *significant form* includes the above-mentioned features that refer to meaning. An object can have several *significant forms*, which however have a one-to-one relation to a meaning. The variety of *significant forms* enables objects to be considered as *polysemic* (i.e. relating one



signifier to more than one signified). Thus, every complex object has more than one meaning.

### **3.3.5 Denotation and Connotation.**

Hjemslev pointed out that the correlation of the expression and content planes of a sign can form the expression of a new sign and this process can continue indefinitely. The new semiotic coupling is the *connotative level*, while the first is the *denotative* one. Thus, a *connotative level* is when there is a further signification relying on a primary one.

According to Eco (51) and Jencks (52), the difference between denotation and connotation is due to a coding convention depending on the order in which meanings are learned. *Denotation* and *connotation* of a specific sign vary according to the reading of the user, especially in design, not only because of its polysemic nature, but also because of its dependence on social conditions and ideologies, which enrich that polysemic nature.

In design, the useful object is the sign vehicle of its function, which varies according to the code used for interpretation. Products, besides denoting a function, connote an ideology of that function, as well as other conventions and symbols, representing in each case the social utility of the product (53).

### **3.3.6 Indicators, Signals and Intentional Indicators.**

Systems of signification are built up by the introduction of new forms into previous semantic fields. It seems that with the introduction of new forms, and with shifts in the needs of the public, meanings in design change through successive stages and forms change their nature as signs. In many cases, the meaning of a form changes through successive stages from an utilitarian base to an aesthetic and symbolic level and vice versa. This shows that the use of an object, or form, is not primarily communicative and

that a conventional code is only one aspect of the sign system in design. This also means that a form changes its nature as a sign from *index* to *symbol* (using Jencks's terms), or from *indicator* to *signal* (using Bonta's terms).

Bonta (54) defines three components in the meaning of designed form : *indicators, signals and intentional indicators*. *Indicators* are the directly perceptible facts, which give information about indirectly perceptible facts, which compose the meaning of the indicator. Through the former one can learn something about the latter. In the context of design, the former is an object's form and the latter its meaning. The person who realizes that an indicator is referring to a meaning is the *interpreter*. Thus the indicative relationship becomes triadic: form, meaning, interpreter. Signals, as well as having all the characteristics of indicators, must be deliberately used for communication and must be recognisable as such by the interpreter. In the case of a signal, an *emitter* (using Bonta's term), communicates or transfers something to someone (i.e. the interpreter). There is the possibility of error in reading either an indicator or a signal. There is also the possibility of deceit in a signal (e.g. the emitter giving false information).

Bonta argues that 'indicators tend to show objective reality, matters of fact' while 'signals communicate what is called by Buyssens *states of consciousness* of the emitter' (55). Bonta also distinguishes indicators from signals by the nature of the bond linking the form to its meaning. Signals communicate, while indicators indicate. 'Communication theory is concerned with the study of signals; indication theory with the study of indicators. Both are branches of the theory of meaning or signification' (56). The levels of communication and indication frequently overlap in design and objects can be simultaneously signals and indicators. The relations established between form and meaning with the emitter and the interpreter are the ones that define something either as indicator or as signal, and not the nature of it as an object.

The third component in the meaning of a designed form is the *intentional indicator*;



it is an indicator deliberately used by someone to generate an act of communication but which must not be recognised as such by the interpreter (57). In design, intentional indicators are most usual. This component is called *expressive*. There is interaction between indicators, intentional indicators and signals. It is possible for an object to pass from one stage to another, and therefore changes in meanings are usual. *Indicative*, *communicational* and *expressive* values are the three components of meaning. Design language is in a state of continuous transformation and consequently, there is in practice disparity in the reading of the same form by various interpreters. One form may be seen as indicator, signal, or intentional indicator according to the phase of the development of the design language and the particular user.

### **3.4 Application of Product Semantics in the Contemporary Market System.**

Semiotics, and in particular product semantics, is used in this study as a tool to investigate the formation of signs in the interaction between people and objects. Providing the background for the interpretation of the communication between people and objects, product semantics can enhance a designer's ability to create forms and products that help users to participate in their environment. Equally, product semantics can be used to approach and understand various designed forms that are different from the present styles and metaphors.

Product semantics has been applied to the customising of products, by providing signification models and defining strategies for a more subjective way of dealing with them. In practice, product semantics is regarded as a tool to increase consumption, making products user-friendly by means of metaphors and similes. It is used by manufacturers and designers to create expressive and joyful forms, aiming to develop design beyond the function of the product and the black-box aesthetic of the 1960s and 1970s. The author believes that although it is an excellent method of investigation,

product semantics is not the only means of exploring material culture subjects and it should not be used as a basis for styling.

In respect of company image, product semantics can play a very important role. It is through products that companies communicate information and messages, and project their image. Products transmit information about their purpose, performance, operation, production, origin, and manufacturer. Products project qualities and act as status symbols. They influence preferences and buying decisions. Separately or as a whole, they project a company's image. Therefore, a company should base its production on a systematic analysis of the areas it influences (e.g. environment, the economy).

In the present social system of increased information, variety and selection, a company's success is influenced by its image. Therefore the need for a corporate strategy aimed at a consistent representation of the company's objectives is greater now than ever before. The application of product semantics, product syntactics and product pragmatics to product design can help to build up a consistent image.



## REFERENCES.

- (1) Daniel Miller, *Material Culture and Mass Consumption*, (Oxford Basil Blackwell Ltd., 1987), p.109.
- (2) *ibid.*, pp. 110-111.
- (3) Adrian Forty, *Objects of Desire; Design and Society 1750 - 1980*, (London, Thames & Hudson Ltd., 1986), p. 8.
- (4) Peter Dormer, *The Meanings of Modern Design, Towards the Twenty First Century*, (London, Thames & Hudson Ltd., 1990), p.114.
- (5) *ibid.*, p. 176.
- (6) Umberto Eco, *A Theory of Semiotics*, (Indiana University Press 1976), p.8.
- (7) *ibid.*, p.20.
- (8) *ibid.*, p.48.
- (9) Collin Cherry, *On Human Communication*, (Cambridge (Mass), MIT Press, 2nd ed., 1968), p.10.
- (10) *ibid.*, p.8.
- (11). Umberto Eco, *op. cit.*, p.49.
- (12) *ibid.*, p.8.
- (13) *ibid.*, p.30.
- (14) Collin Cherry, *op. cit.* p. 9.
- (15). Roland Barthes, *Elements of Semiology*, (London Jonathan cape Ltd, 1967), p. 2.
- (16). Geoffrey Broadbent, Meaning into Architecture, in *Meaning in Architecture*, ed. by Charles Jencks and George Baird, (London Barrie and Rockliff, The Cresset Press, 1969), p.51.
- (17). Roland Barthes, *op. cit.*, pp 26-29.
- (18). Rudolf Arnheim, *Visual Thinking*, (Los Angeles University of California Press, 1969), p.54.
- (19). Jurgen Ruesch, Non Verbal Language and Therapy, in *Communication and Culture*,

l.c., p.209.

- (20). Mihaly Csikszentmihalyi and Eugene Rochberg - Halton, *The Meaning of Things, Domestic Symbols and the Self*, (Cambridge Cambridge University Press, 1981), p.20.
- (21) Peter Dormer, op. cit., p. 179.
- (22) Daniel Miller, op. cit., p. 124.
- (23) ibid., p. 112.
- (24) ibid., p. 116.
- (25) ibid., p. 119.
- (26) ibid., p. 120.
- (27) Adrian Forty, op. cit., p. 9.
- (28) ibid., p. 9.
- (29) Daniel Miller, op. cit., p. 115.
- (30) Sven Hesselgren, *Man's Perception on Man-made Environment, an Architectural Theory*, (Stroudsburg, Penn: Dowden, Hutchinson & Ross Inc.; Lund: Studentlitt, 1975), p. 21.
- (31). Donald A. Norman, *The Psychology of Everyday Things*, (New York, Basic Books Inc.Publishers, 1988), p. 57.
- (32). ibid., p.66.
- (33). ibid., p.127.
- (34). ibid., p.85.
- (35). Uday A. Athavankar, The Semantic Profile of Products, in *Semantic Visions in Design*, proceedings from the Symposium on Design Research and Semiotics 17-18.5.1989, Helsinki (UIAH), 1990, p. d3.
- (36). ibid., p. d17.
- (37) Peter Dormer, op. cit., p.105.
- (38) ibid., p.102.
- (39) ibid., p. 32.
- (40) Uday A. Athavankar, op. cit., p. d6.
- (41) Horst Oehlke, In Search of Product Semantics, in *Semantic Visions in Design*, p. e10.
- (42). Umberto Eco, Function and sign: The Semiotics of Architecture, in *Signs, Symbols and*



*Architecture*, ed. by Geoffrey Broadbent, Richard Bunt and Charles Jencks, (Chichester John Wiley and Sons Ltd, 1980), p.37.

- (43). Klaus Krippendorff and Reinhart Butter, Product Semantics, Exploring the Symbolic Qualities of Form, *Innovation, The Journal of the Industrial Designers' Society of America*, vol. 3, no. 2, 1984, p.6.
- (44). Klaus Krippendorff, op. cit., p. a7.
- (45). Roland Barthes, op. cit., 47.
- (46). ibid., p. 47.
- (47). ibid., p. 42.
- (48). ibid., p. 48.
- (49). Charles Jencks, The Architectural Sign, in *Signs, Symbols and Architecture*, p.73.
- (50). Juan Bonta, Notes for a Theory of Meaning in Design, in *Signs, Symbols and Architecture*, p. 283.
- (51). Umberto Eco, 1976, op. cit., p.55.
- (52). Charles Jencks, op. cit., p. 83.
- (53). Umberto Eco, Function and sign: The Semiotics of Architecture, in *Signs, Symbols and Architecture*, p. 24.
- (54). Juan Bonta, op. cit., p.277.
- (55). ibid., p.277.
- (56). ibid., p.278.
- (57). ibid., p.279.

## 4 . CONTEMPORARY TENDENCIES IN THE DEVELOPMENT OF THE OFFICE.

### Analysis of the Study Findings.

Chapter 4 deals with the analysis of the findings of two questionnaires, that consist an essential part of the study. The first questionnaire was addressed to office furniture manufacturing companies and the second to office premises in banks, in order to provide evidence on contemporary office in the particular context of five countries from within the European Community. 60 office furniture manufacturers and 35 banks were questioned.

The content of the questionnaires was relevant to the subjects described in the model. The objective was on the one hand to provide information for the setting of the model and on the other to investigate the significative nature of office design as interpreted by the public. Both questionnaires refer to both of the above mentioned targets. Questions 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19 of the first questionnaire and questions 2, 3, 4, 5, 6, 13, 14, 15 and 16 of the second questionnaire aim to complete the model. Questions 13, 14 of the first questionnaire and 7, 8, 9, 10, 11, and 12 of the second questionnaire are used in the recording of the relationship between material substances and concepts. Equal charts in the appendix refer to the graphical representation of the results as analysed by the MS EXCEL Macintosh software.

Two methods of analysis were followed in the survey. In the first, the findings are represented by horizontal bars with their starting point on the same vertical axis. Each bar represented a specific answer as explained by a memorandum. The longer the bar, the higher the percentage of the respondents that favour it. Visual comparison of preferences is possible. The second way of analysis refers to the semantic referential method applied to questions 9, 10, 12 and 14 of the second questionnaire to overcome difficulties in the response to abstract subjects. Pairs of antonyms are placed on a vertical axis, and a scale



representing degree of preference on a horizontal one. Horizontal shaded bars represent preference. Consensus is indicated by the lengths of the shaded bars. The shorter the bar the greater the consensus; the longer the bar the lesser the consensus. The black points represent mean (average) scores. The study deals with the consensus of the subjects and the position of the means in accordance with the ends of the scale (1 and 9) (1).

According to the analysis of the findings, the respondents regard economic, political and legislative factors essential to the production of office furniture. Competition between firms, but also between financial institutions is a factor favouring design in the contemporary office. Under these circumstances designers play an important role in both the production of office equipment such as furniture and the synthesis of the identity of a bank. However, attempts to innovate products or interiors very often lead to restyling. Technology is the main source of new ideas. Computers and other electronic devices within the office changed the type of work within the office and consequently its demands.

In the particular context of the European Community an unstable economy forced financial institutions to try to maintain their image and their customers by any means. Consistency, stability, friendliness, flexibility and care for the individual are significant concepts to be projected by a bank. Simple and rational interiors aiding close contact with the customer, comfortable furnishing with rounded edges and upholstery, matt surfaces and fine textures, combination of dark and pastel colours are some of the means to signify the desired meanings.

#### **4.1 Economy and Office Furniture Production.**

Technology-orientated production in the 1960s became economy- and design-orientated production from the mid 1970s onwards. The economic instability that followed the first oil crisis affected since that time the cost of energy and raw materials. It

consequently affected both the production of office furniture and the design of the office and especially that of banks. The presence of banks within the new, differentiated system demanded a new image.

Office furniture production seems to be really affected by the state of the economy, national and international<sup>1</sup>. 41% of the European firms in the sample declared that they are affected significantly by the national economy and an additional 28% to an even greater degree. Thus, the 69% of the sample of European firms producing office furniture regard the state of the national economy an extremely important factor. According to the sample, British production of office furniture is least affected by the state of national economy and is not completely dependent on it. By contrast, Spanish and Greek firms regard the state of the national economy as a very significant determinant. The five countries in the sample seem to have been affected by the state of the national economy to a very great extent: Germany 83%, Britain 44%, Spain 100%, Italy 68%, Greece 100%. The particular economic and social problems in these two countries and the dependence of economy on governmental policy (cf ch. 2.4.2. and 2.4.4.) explains why these countries estimate national economy as very important.

Global economic conditions are less important to all countries than national economy, although German and Italian firms rated this factor highly probably because their developed export policy is more affected by the international economy. According to the results of the present study<sup>2</sup>, almost all German, Italian and Spanish firms follow a vigorous export policy compared with 63% of the British firms and 25% of the Greek firms. As far as imports are concerned, no country in the sample has enough indigenous

---

<sup>1</sup> 1st questionnaire, 5th question: To what extent, in your opinion, do the following factors influence your production? (National economy, International economy, Oil crisis, Politics, Government policy concerning manufacturers, Government policy concerning middle class income, Government policy concerning upper class income, Mass media, Other countries production similar to yours, Technological evolution, Architectural tendencies, Design tendencies, Others)

<sup>2</sup> 1st questionnaire, 2nd question: Do you export your products? (EEC countries, Outside EEC) 1st questionnaire, 3rd question: Do you import components or materials? (EEC countries, Outside EEC)



raw materials and components, but Germany, Italy and Spain import raw materials and components to a lesser extent than they export their products. Greek production is totally dependent on imports, where British firms import more than they export. Germany, Italy and non-EEC countries provide about the 75% of the raw materials and components for European production, while France, Belgium, Holland, non-EEC countries and Britain import a lot. Moreover, Britain seems to differentiate the production of their overseas operations, an attitude that is not followed by the others, an attitude which could have negative results to the success of British commerce, as the production cost rises without improving the quality of a product.

According to the above, it is obvious that German and Italian firms participate to a great extent in the circulation of capital, goods and services, determining the market in the field. Spanish firms follow a progressive marketing plan, though they have to overcome a previously inadequate background (cf.ch 2). There is a tendency for British firms to be conservative and because of that often have difficulties in following the continuous changes in the market. Greek firms have great difficulties to follow the spirit of the times, being dependent on undeveloped industrial and economic background.

It seems that market in the European Community is highly influenced by any single economic system within the union. Extremely developed import and export trading between each one of the specific markets in the EC, and exchange of raw materials are the main reasons for high interdependence in the particular area.

#### **4.2. Office Furniture and the Market System.**

The interdependence in the market is responsible for the fact that most of the countries in the sample, are influenced in their production by foreign competitors<sup>3</sup>.

---

<sup>3</sup> 1st questionnaire, 5th question: To what extent, in your opinion, do the following factors influence your production? (National economy, International economy, Oil crisis, Politics, Government policy

41% of the EEC firms consider foreign competition very influential. i.e.: 42% of the German firms, 38% of the British firms, 75% of the Spanish firms, 36% of the Italian firms and 50% of the Greek firms. This factor is considered more important than the influence of the mass media, politics, government policy concerning middle or upper class income, and government policy concerning manufacturers. However, in specific cases like Greek and Spanish production, government policy is equally important. Competition becomes really high within the system of the European Community and especially between small companies whose number increased during the 80s (cf ch. 2.2.5).

Manufacturers regard<sup>4</sup> that success in the market depends on the durability of their products (12%), on their reputation (12%), on the service they provide (12%), on reliability (12%), on innovative design (11%), on speedy delivery (10%) and on product range (8%). Comparing this with the users' opinion, the few differences that appear concern the demand for wide product range (7%) and the innovative design (8%). The other factors seem to have about the same importance: good service (14%), reliability (13%), speedy delivery (13%), durability (13%). Price is a factor that manufacturers and users do not regard in the same way; 11% of the users but only 6% of the manufacturers think that low cost determines buyers' decision. This suggests that either the users are not conscious of the role appearance plays within the office in order to overcome price limitations, or manufacturers generally do not correctly interpret the market forces in their anxiety to find solutions to the problem of competition. The revelation in the findings is that users criticizing contemporary office furniture consider innovation in the field very poor, while they found quality, style, durability, flexibility, servicing, functionality and

---

concerning manufacturers, Government policy concerning middle class income, Government policy concerning upper class income, Mass media, Other countries production similar to yours, Technological evolution, Architectural tendencies, Design tendencies, Others)

<sup>4</sup>1st questionnaire, 19th question: Please indicate, by rating each one out of ten, the factors that led your clients to approach you instead of your competitors. (Better performance, Better service, More innovative design, Faster delivery, Lower cost, More successful advertising, Reliability, Durability, Wider range of production, Reputation in the market, Others)



comfort reasonably good but price rather high, although they declare that innovation is not such an important factor in their decision making.

The market system forces manufacturers to advertise their products. The most common ways of advertising in the European Economic Community are the publishing of impressive brochures (28%), the participation in exhibitions (25%) and the advertisements in specialist magazines for interior design.

According to the sample of office furniture manufacturers, consumers' taste<sup>5</sup> is extremely influenced by mass media (32%), by fashion (21%), by change in practical needs (18%), by individual designers (15%), by class, culture or group standards (13%), and by change in psychological needs (7%). Life-style became a major factor within the cultural and social system in Europe (cf ch. 2.3) and determined the image of the public and consequently its preferences as projected by the mass media.

As far as the supply of office furniture equipment is concerned, most of the institutions order according to present needs (42%), a large number have a permanent supplier (26%), some buy according to what is available in the market (14%), some stock from large quantities (12%) and only a small number design in house and make their designed products locally (5%). Actually, Greece (14%) and Spain (17%) design in house to a greater extent than the other countries and Britain (31%) as well as Greece (29%) have a policy to stock equipment to cover their needs. A poor industrial background as well as expensive imported products in the market could be some of the reasons for designing in house. Stocking equipment and furniture ensures that 'turn-over-time' of products does not affect the identity of an institution which desires to maintain a more permanent environment.

22% of the office furniture manufacturers in the sample believe that new target

---

<sup>5</sup>1st questionnaire, 18th question: How influential in your opinion, are each of the following factors on your consumers' taste? (Mass media, Individual designers, Fashion, Class, culture or group standards, Change in practical needs, Change in psychological needs, Others).

groups will secure a place in the future market, 18% will try to provide more services, 16% will introduce a wider product range, a 14% will establish new branches, 13% will be specialised in certain products, 13% will depend more on advertising than in the past and just 1% will provide less services.<sup>6</sup> Almost all the companies in the sample change their products within five years<sup>7</sup>; 62% redesign their products within 1 - 3 years and another 26% within 3 - 5 years. German firms tend to maintain their models up to five years while all the other countries in the sample plan for shorter periods of time. Extended market for the German products, together with a general attitude towards rational design and stability could be some of the factors of their resistance against reducing 'turn-over-time'.

The main reasons for introducing new products<sup>8</sup> is either to launch an innovative product, or use new technology; 25% of the firms in the sample launched an innovative product during the 1970s and the 1980s, 21% introduced new technology, 17% followed new tendencies in design, a 16% improved quality, a 10% attempted to meet changes in the demands of target groups and a further 4% introduced a new product for economic reasons. Periods of major changes are the years 1980, 1982, 1985, 1986, 1988 and 1989.

As a result innovation became one of the most important factors embodied in products<sup>9</sup>. Its importance was risen from 13% in the years 1970-1975 to 33% in the

---

<sup>6</sup>1st questionnaire, 8th question: What are your aims and plans as far as the market is concerned in the 90s? (New branches, New ways of advertising, New target groups, More services to be provided, Less services to be provided, More specialised production, Wider production, Others)

<sup>7</sup>1st questionnaire, 7th question: How far in the future do you plan your production for? (1-3 years, 3-5 years, 5-10 years, 10 years or more)

<sup>8</sup>1st questionnaire, 16th question: When did you change your products' appearance during the last 20 years and why? (To use new technology in manufacture, To launch an innovative product, To adjust your production to new tendencies, To alter products due to economic conditions, To match the change in your target group demands, To improve the quality of your products, For another reason)

<sup>9</sup>1st questionnaire, 13th question: Which of the following concepts and attributes have been reflected in the form of your products during the periods 1970-1975, 1975-80, 1980-1985, 1985-1990? (Luxury, Comfort, Status, Durability, Functionality, Flexibility, Individuality, Informality, Relaxation, Austerity, Innovation, Others)



years 1985-1990. 23% of the firms in the sample regard technological innovation as a very significant influence, 44% a significant influence, 25% of some influence and no firm disregarded it. Manufacturers of office furniture depended on design innovation rather than technology-orientated innovation to renew their production, because technology in this particular field during the last two decades was moving at slow rates. Technology has indirectly affected the office environment through the introduction of computers<sup>10</sup>. Because of computers, essential changes occurred in the design and the form of service desks (28%) as the ergonomic demands were based on new elements. The rearrangement of services (24%) was necessary, as well as specific materials in the construction of furnishings, floor coverings and so on (20%) to accommodate the new infrastructure. Computers and other information technology products such as fax and telex machines, photocopiers and printers resulted to an increase in the amount of space per individual employee (23%).

#### **4.3. The Role of Design and Designers in the Formation of the Office.**

Design is regarded, according to the findings, as the most influential factor affecting production<sup>11</sup>. Moreover, 33% of the firms in the sample counted that it is very influential, 49% that it is quite influential and a further 15% that it is influential to some extent. Just 2% regarded it as insignificant. Architecture influences innovation: 20% regard it as very influential, 46% regard it as influential to a great extent, 26% believe that

---

<sup>10</sup>2nd questionnaire, 13th question: What changes, if any, were made in the arrangement of the working environment when computer terminals were introduced? (Need for more space per individual employee, Need for more privacy for individual employees, Essential change in the arrangement of services, Essential change in the design and form of service desks, Need for use of specific materials in the construction of furnishings, in floor covering, e.t.c.)

<sup>11</sup>1st questionnaire, 5th question: To what extent, in your opinion, do the following factors influence your production? (National economy, International economy, Oil crisis, Politics, Government policy concerning manufacturers, Government policy concerning middle class income, Government policy concerning upper class income, Mass media, Other countries production similar to yours, Technological evolution, Architectural tendencies, Design tendencies, Others)

it is influential to some extent. Only 3% deny it is influential. In other words, design is the most influential factor in the production of office furniture, followed by national economy, technological innovation and architectural tendencies.

Users in the sample representing banks, agree also that design is a significant factor<sup>12</sup>. 22% of the users consider that design expresses and advertises to a very great extent the character and the image of a financial organisation, 50% regards design expressive and a means of advertising to a great extent, and a further 28% believe that it expresses and advertises a financial organisation to some extent.. There were differences between users in different countries as far as the significant categories are concerned: Germany 89%, Gr. Britain 50%, Spain 100%, Italy 80%, Greece 33%. Image has become very important during the last fifteen years, expressed by life styles and represented mainly by styling. It is used as a signification of values existent or desirable. Additionally, many bank representatives, especially in Germany, believe that design affects even the decision of bank customers to deal with a bank. Office furniture manufacturers believe also that design affects definitely social values and attitudes<sup>13</sup> by establishing new needs ( 56%), by introducing new technology (51%), by changing the public's taste (51%), by promoting the use of new materials (49%) and by changing the public's spatial behaviour (31%).

Design being so influential infers that professional designers are engaged by companies<sup>14</sup>. 97% of the companies in the sample producing office furniture employ designers and a 3% use either freelance designers or in house personnel who are not

---

<sup>12</sup>2nd questionnaire, 4th question: To what extent, in your opinion, does the design of the working environment: a) affect the decision of bank customers to deal with your bank? b) express and advertise the image and the character of a financial organization?

<sup>13</sup>1st questionnaire, 17th question: To what extent, in your opinion, does design affect social values and attitudes, and by which of the following means? (By promoting the use of specific materials, by establishing new needs, by introducing new technology, by changing the public's taste, by changing the public's spatial behaviour, otherwise).

<sup>14</sup>1st questionnaire, 10th question: What categories of designer do you employ? (Interior designers, Industrial designers, Furniture designers, Architects, Engineering designers, Draughtsmen, None, Others)



trained designers; the latter are small businesses where the manager is usually the one who makes the design decisions. Industrial designers are extensively employed in German (30%), Italian (29%) and Spanish (60%) firms, while British firms prefer furniture designers (33%) and Greek firms interior designers (29%). Italian firms employ architects (37%) more than specialised designers; accidentally a favoured profession in their culture. Correspondingly, the majority of banks (94%) have a special department for the design, construction and restoration of their property and they also employ freelancers for some projects (94%). Architects (72%), technicians (67%) and estate surveyors (53%) are the most common occupations in design departments<sup>15</sup>. Especially in Britain, 90% of the design or premises departments employ technicians. In Italy 90% employ architects, 100% estate surveyors and 70% civil engineers and in Greece 67% employ civil engineers. Moreover, the majority of the banks have a policy on the design and the style of their interiors (83%) and the arrangement of services within it (8%), though more flexible about the exteriors (53%)<sup>16</sup>.

The above policy takes into account the particular characteristics of the area served by a branch (61%) and to a lesser extent the cultural differences of its clients (33%)<sup>17</sup>. German banks seem to have a policy to minimize the influence of the clients' cultural characteristics on the designing of their branches and Greek banks tend to adjust completely to the particular characteristics of the context of a branch. The latter could be

---

<sup>15</sup>2nd questionnaire, 2nd question: a) Is there a special department in your bank that has the responsibility for the design, construction and restoration of the buildings and branches of your bank? b) What categories of employees constitute the above mentioned department? (Architects, Civil engineers, Mechanical engineers, Interior designers, Furniture designers, Technicians, Draughtsmen, Quantity Surveyors, Estate surveyors, Building supervisors, None, Others) c) Do you employ consultants, freelance designers, architects, etc. for some of your projects?

<sup>16</sup>2nd questionnaire, 4th question: a) Do you have a broad policy regarding: a) the design and the style of the exterior (facades) of all your branches? b) the design and the style of the interiors of all your branches? c) the arrangement of services within the working areas of all your branches? As a result of the above policy, do you have common rules regarding the above?

<sup>17</sup>2nd questionnaire, 6th question: Do you develop the design and the style of your branches in relation to a) the area they serve, b) the cultural context of the clients.

related to the rather loose definition of corporate identity system followed by Greek Banks. Specifically, 44% of the German Banks, 80% of the British Banks, 100% of the Spanish Banks, 70% of the Italian Banks and none of the Greek Banks in the sample, specify the colours and the house style of their institution according to a Corporate Identity Manual<sup>18</sup>. 56% of the German Banks, 20% of the British Banks, 30% of the Italian Banks and 100% of the Greek Banks embody the above specification in the province of the Manager (40%), the Architect (32%), the Consultant (12%), the Designer (8%), or the Advertiser (8%).

#### **4.4 Concepts that ideally should be expressed by the working environment in Banks.**

According to the findings of the survey<sup>19</sup>, users regard flexibility as the most significant factor in the design of the working environment: 53% of the sample consider it as very important and a further 33% important. The results vary slightly from country to country; in aggregate 78% for Germany, 90% for Britain, 100% for Spain, 90% for Italy and 67% for Greece. According to the users, they either have managed to acquire this characteristic or they try to organise their environment in order to meet it.

Friendliness is another concept that according to bank representatives should be

---

<sup>18</sup>2nd questionnaire, 3rd question: Are the colours and the house style of your Bank, specified in a corporate identity manual? If your answer is NO, state by whom they are specified: (Manager, Designer, Architect, Consultant, Advertiser)

Which is the colour of your logo? (Please specify and/or send a sample)

<sup>19</sup>2nd questionnaire, 8th question: To what extent should the following concepts be expressed by the working environment of a bank according to the broad philosophical notions of your bank? (Friendliness, Austerity, Sobriety, Authority, Rationality, Stability, Flexibility, Impersonality, Independence, Individuality, Openness, Consistency, Affluence, Comfort)

2nd questionnaire, 7th question: To what extent are the following factors important for a pleasant working environment: a) for employees and b) for clients according to the broad philosophical notions of your Bank? (Colours, Music, Comfort, Luxury, Furnishings, Plenty of space).



evident in the working environment of a bank. 50% regard it as very important and a 33% important. All the German respondents consider it very important, 60% of the British regard it very important and 30% important. The Spanish are more conservative and a 50% consider it important. Of the Italian respondents 30% regard it as very important and 50% as important. 33% of the Greek banks consider it very important and 67% consider it important.

Consistency is considered important by 33% and very important by 47% of the respondents. Stability is considered to be important by 36% of the respondents and very important by 44%. Corresponding figures for rationality are 39% and 33% and for affluence 19% and 17%. Thus, consistency, stability, rationality and affluence should be evident in a successful financial organisation. In the sample 14% of the banks regard individuality in the working environment as very important, and 39% as important.

Comfort and spaciousness are essential in the working environment. Comfort is generally more desired for employees (89%) than for bank customers (75%). However, opinions vary from country to country. In Germany, comfort is regarded as equally important for employees and clients. In Spain, a comfortable environment is regarded as more desirable for clients than for employees. Spaciousness is regarded as equally important for clients and employees, but Germany and Britain favour spaciousness for bank customers rather than for employees. The quality of office furnishings is regarded as very important by bank employees and bank customers. However, in Germany and Spain, banks are more concerned about their customers than their employees as far as furnishings are concerned.

#### **4.5 Typical Characteristics of a Contemporary Interior in European Banks in the 80s .**

The main characteristics of a typical working environment<sup>20</sup> in Banks are

investigated through the "semantic differential" method (cf ch. 1.3.2), using a nine value scale . Words in pairs are used to measure the meaning of the particular existing stereotype.

As a general comment Greece and to a lesser extent Spain show greater consensus, a fact that results perhaps from the limited number of subjects participating in the survey comparing to the other countries.

'Simple - complex' pair of antonyms: The synthesis of the place is here investigated, in terms of parts or subordinated classes. These parts or subordinated classes can be divisions into smaller spaces or levels, materials, colour fields, and so on. Simple is the working environment created by the least mixtures, while by complex is meant the one that is made by a number of dissimilar parts intricately connected, whose relationship is very often difficult to understand. In most countries except Germany the mean is placed on the left side of the scale towards the meaning of simplicity, which means that the majority of the subjects in Italy, Britain and Spain see their environment as simple rather than complex. However, the bars cover either sides of the scale, which means that there are some subjects seeing their working environment as complex, even though the majority see it as simple. Particularly, in Greece the whole bar is placed on the left side towards the word 'simple', which means that no one thought of his/her environment as rather complex than simple. British subjects show the least consensus among the other participants. The variety in views provided a total result concerning all the five countries, where the bar covers the whole scale with an average placed slightly to the left of the scale towards 'simple'.

'Rational - intuitive' pair of antonyms: Their antithesis refer to the understanding of

---

<sup>20</sup>2nd questionnaire, 9th question: Please characterise by ticking one of the nine steps of each scale, the working environment of an average branch of your bank. (simple - complex, rational - intuitive, ambiguous - clear, plain - ornate, confined - spacious, permanent - temporary, Uncomfortable - comfortable, straightforward - contradictory, passive - active, unique - common, exciting - calming, interesting - boring, open - closed, chaotic - ordered, tight - loose, considered - arbitrary)



the working environment, with or without conscious reasoning or study. Rational - intuitive is a pair generally of little consensus, as most of the bars cover seven from the nine subdivisions. Again German subjects differ from the rest as the average is placed slightly nearer the 'intuitive' end as far as their working environment is concerned. Italian subjects place it exactly in the middle of the scale being not positive for either characterisation. Spanish subjects define their environment rather rational than intuitive, even closer to the 'rational' end come the British subjects, while the Greek ones place their judgements the closest to the left side of the scale, that is the rational, in comparison to the others. Most of the subjects do not adopt an extreme characterisation.

'Ambiguous - clear' pair of antonyms: The clarity of the meanings of a working environment - as an expressive means - is tested by this polar system. An ambiguous working environment expresses an uncertain meaning or intention, while a 'clear' working environment is well defined. Definitely clear is characterised the working environment of banks in Greece, Italy, Spain and Britain as the consensus bars are placed on the right side of the scale to the 'clear' end. However, some of the German respondents find it slightly ambiguous, although the average is also to the end defining clarity. Greater consensus characterises this polar system compared with the previous ones.

'Plain - ornate' pair of antonyms: It counts the amount of ornament or decoration within the working environment. Diversification in the views of the various countries characterises these data, while a certain degree of consensus is shown among the subjects of each country. Three of the nine divisions are covered by the consensus bars according to the findings of the Greek, the Italian and the British respondents. Relatively ornate is characterised the working environment in Greek, Spanish and German banks as the average is placed very near to the middle of the scale, while almost the same degree of plainness characterizes the Italian and the British environments with the mean placed very near to the middle of the scale, but to the other side of the middle axis.

'Confined - spacious' pair of antonyms: This pair considers the availability of space in the working environment.. The German respondents, showing a low degree of consensus, regard their working environment as rather spacious than confined. The working environment is satisfying the demands for space availability according to the Italian, the Spanish and the British respondents. The Greek respondents are the less satisfied as far as space availability is concerned.

'Permanent - temporary' pair of antonyms: It is a time-concerning antithesis. The respondents express their views on whether their working environment is intended to last maintaining its present form, character, image or decoration, or it is designed to be used as it is for a short time only. Permenancy rather than temporariness seems to be one of the characteristics of most of the working environments in European Banks, as average scores are placed to the left side of the scale. British and German respondents consider their working environment as permanent placing their means half-way between the left end and the middle of the scale, though Greek, Italian, and Spanish respondents consider it permanent but in a moderate way as their means are found to be nearer to the middle of the scale. Great consensus does not characterize either this pair.

'Uncomfortable - comfortable' pair of antonyms: The degree of physical well being provided by the working environment is investigated in this particular part of the study. Comfort is another characteristic of the banking environment with evident distance from the other end. The left side of the scale is almost unmarked from the consensus bars, that means that almost all subjects agree that their working environment is not an uncomfortable one. British respondents are the most satisfied employees as far as comfort is concerned, while all the rest means are placed between the 6th and the 7th division of the nine-valued scale.

'Straightforward - contradictory' pair of antonyms: The 'Straightforward - contradictory' is another approach of the 'simple - complex' polar system, with the



difference that the latter has material substance, while the first a conceptual one. Moreover, it examines the climax between a directly understandable system and another characterised by absence of agreement between its parts. All the respondents regard their working environments as straightforward to some extent as all the average scores are placed in between the 3rd and the 4th division of the 9 valued scale. Particularly, the average score of the Greek respondents is placed even closer to the 'straightforward' end. Moreover, Greek, Italian and Spanish respondents are definite that the working environment in their Banks is not a contradictory one, as we can see from the position of the consensus bars.

'Passive - active' pair of antonyms: This regards the amount of energy showed or directed by the working environment. It is another pair of agreeing views, as all the average scores are placed in between the 6th and the 7th division of the 9 valued scale closer to the concept of activity, though under low consensus on the Italian, the Spanish and the British parts. The interesting point is that the consensus bars of the above respondents reach the far end of the scale, meaning that for some their working environment seems to be active to a very great extent.

'Unique - common' pair of antonyms: It considers the working environment with regard to its character, parts or elements, in terms of them being unusual or ordinary. The concepts of 'uniqueness' or 'commonness' are accepted differently by the various subjects, as shown from the consensus bar of the total result that covers the whole scale. Italian respondents think of their working environment as rather common than unique, Spanish respondents think of it as neither common nor unique, but something in between, German and British respondents place it slightly nearer to common than to unique, but with very low degree of consensus, while Greek respondents show absolute consensus placing it half-way between the 'unique' end and the middle of the scale.

'Exciting - calming' pair of antonyms: It measures the instigation of strong feelings in contrast to a quiet, peaceful and untroubled environment. Rather calming than exciting

is characterized the working environment by most of the respondents, except the Spanish ones, that consider it as slightly more exciting than calming. However, the Italian and the German average scores resulted from a low consensus process, in which some respondents regarded their working environment rather exciting than calming.

'Interesting - boring' pair of antonyms: This measures the characteristic of a working environment to hold attention. It is another conceptual axis in which the average scores in all the countries are in agreement, specifically closer to interesting than to boring, between the 3rd and the 4th division of the scale. Consensus appears greater in that parts of the survey concerning the Greek, the Italian and the Spanish environments and lesser in the British and the German ones.

'Open - closed' pair of antonyms: It is a climax regarding accessibility mainly metaphorically. A certain degree of openness characterises all the working environments according to the data, even though the German respondents have diverse views. The means appear to have the same distance between the 'open' end and the middle of the scale, but it is interesting to notice that there are some among the Greek, the Italian, the British and the German respondents, who consider their working environment as extremely open.

'Chaotic - ordered' pair of antonyms: Here is investigated the antithesis between a confusing environment and one in which everything is carefully arranged. The average scores as far as the Italian, the British and the German respondents are concerned is between the 7th and the 8th division of the 9 valued scale showing orderliness to a great extent. To a slight lesser extent admit orderliness the Greek and the Spanish respondents. The only reference to chaotic situation is made by some of the British respondents.

'Tight - loose' pair of antonyms: It refers basically to the rules it imposes and the behaviour it stimulates. A tight environment leaves limited freedom to the people in it to



behave as they please, while a loose one is obviously less strict and more indefinite. An evident diversification is showed by the data concerning this pair of antithetical concepts. Greek respondents characterize their working environment as loose to some extent with great consensus while, the Italian and the German respondents though placing their mean to the right part of the scale referring to 'looseness', are much closer to the middle of the scale, also with contrasting views among the subjects. The average scores of the Spanish and British respondents appear on the left side of the scale, closer to the concept of tightness, but still very near the middle of the scale that means that their characterisation is not really clear as it happens with the Italian and the German case.

'Considered - arbitrary' pair of antonyms: This is about reasoning and thoughtful decision making in the designing of space vs actions based on impulse only. There is an almost definite view among the subjects to see the working environment in European Banks as considered to some extent, as shown by the means appearing around the 3rd division of the scale nearer to the concept of consideration. Additionally, some British and German respondents regard it as extremely considered.

To summarize, German respondents, who are the ones with the most contradicting views, characterize their working environment as permanent, comfortable, straightforward, active, ordered and considered to a great extent. They also see it as considerably clear, spacious, interesting and open, but not really either rational or intuitive, unique or common, tight or loose. They believe that these characteristics of the working environment in German Banks express consistency, stability and austerity to a great extent, friendliness and rationality to some extent and certainly not affluence and impersonality.

British respondents show also limited consensus. They characterize the working environment in British Banks as clear, permanent, comfortable, calming, open, and considered to a great extent. According to their views it is also simple, rational, plain, straightforward and interesting to some extent. British respondents associate the above

characteristics with the concepts of consistency, stability and friendliness and also with openness and flexibility. They think also that concepts such as affluence, independence, impersonality, sobriety and austerity have no association to the above mentioned characteristics.

The data from the findings on the Spanish banking environment present it as rather clear, straightforward, active, open and considered. An interesting point is that many of the characteristics mentioned do not seem to be clearly defined by the Spanish Banks as the respondents are not definite for either of the simple or complex, rational or intuitive, confined or spacious, unique or common, tight or loose poles. They think that sobriety, rationality and comfort are expressed to a great extent by these characteristics, and to some extent openness, individuality and friendliness. Affluence, consistency, independence, impersonality, flexibility, stability, authority and austerity are not expressed by the characteristics they give according to their associations.

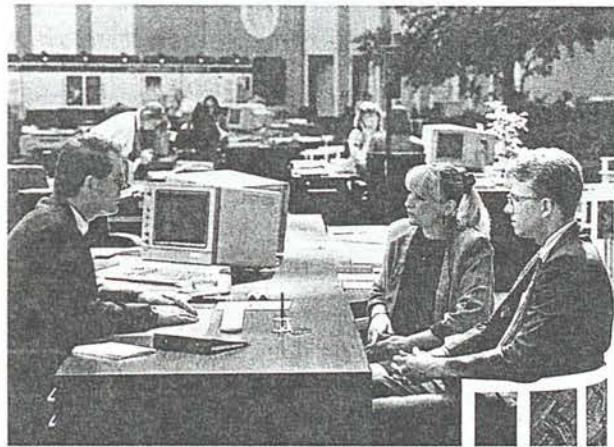
Italian, similarly to Spanish respondents, present an indefinite view as far as the characteristics of the working environment in Italian banks are concerned. They see their working environment as clear, plain, comfortable, straightforward, open, ordered, loose and considered to some extent, but neither simple nor complex, neither rational nor intuitive, neither confined nor spacious, neither permanent nor temporary. Flexibility, rationality and sobriety are the main concepts connected with the above characteristics, while there is a distance between the image of the Italian Banks as presented by the subjects and the concepts of individuality, independence and authority.

Finally, Greek respondents presenting a high degree of consensus say that the working environment in Greek banks is simple, clear, straightforward, unique, open and considered, but also considerably ornate, comfortable, active, calming, ordered and loose. It is also neither confined nor spacious. These characteristics as interpreted by the respondents show a relationship with the concept of consistency, and to a lesser extent



with affluence, openness, independence, flexibility, stability, rationality and friendliness.

Besides the above, the working environment in banks of the five countries participating in the survey seem to be formed under different priorities<sup>21</sup>. In Germany readable signage (14%) and service desks without glass protection(14%) [fig. 36] are the most representative characteristics, followed by writing desks for clients (12%), comfortable armchairs in waiting areas (12%), matt surfaces (12%) and semi-private working areas. Open space arrangements is not a common approach (2%) and shiny surfaces, rough textures and private working areas are avoided. Stability (13%), austerity (11%) as well as friendliness (11%), comfort (9%), consistency (9%) and rationality (9%) meant to be expressed by the above means according to the subjects' view. Additionally, affluence and impersonality are signified by no means and expression of authority is kept to a minimum (4%).



**Fig. 36.** In Germany readable signage and service desks without glass protection are the most representative characteristics of an interior of a bank.

<sup>21</sup>2nd questionnaire, 11th question: Which of the following statements represent best your policy, as far as the design of the working environment is concerned? (Open space arrangement, Semi-private working areas, Private working areas, Service desks with glass protection, Service desks without glass protection, Low-height service desks, Smooth textures, Rough Textures, Shiny surfaces, Matt surfaces, Comfortable armchairs in waiting areas, Writing desks for clients, Readable signage, No answer).

In Britain open space arrangement [fig. 37] seems to be the most preferable layout (13%). Comfortable armchairs in the waiting areas (11%) [fig. 38], matt surfaces (11%), readable signage (10%), low-height service desks (10%) and service desks with glass protection (10%) [fig. 39] are also common, but shiny surfaces (3%), rough textures (3%) and private working areas (3%) are not preferred. Friendliness (17%) is mainly signified by the British approach, followed by stability (15%) and openness (15%), as well as consistency (13%), comfort (11%) and flexibility (11%) according to the interpretation of the subjects. Austerity, sobriety, impersonality and affluence are avoided to be expressed, while independence (2%) and rationality (2%) are kept to a minimum.



Fig. 37. In Britain open space arrangement seems to be the most preferable layout.



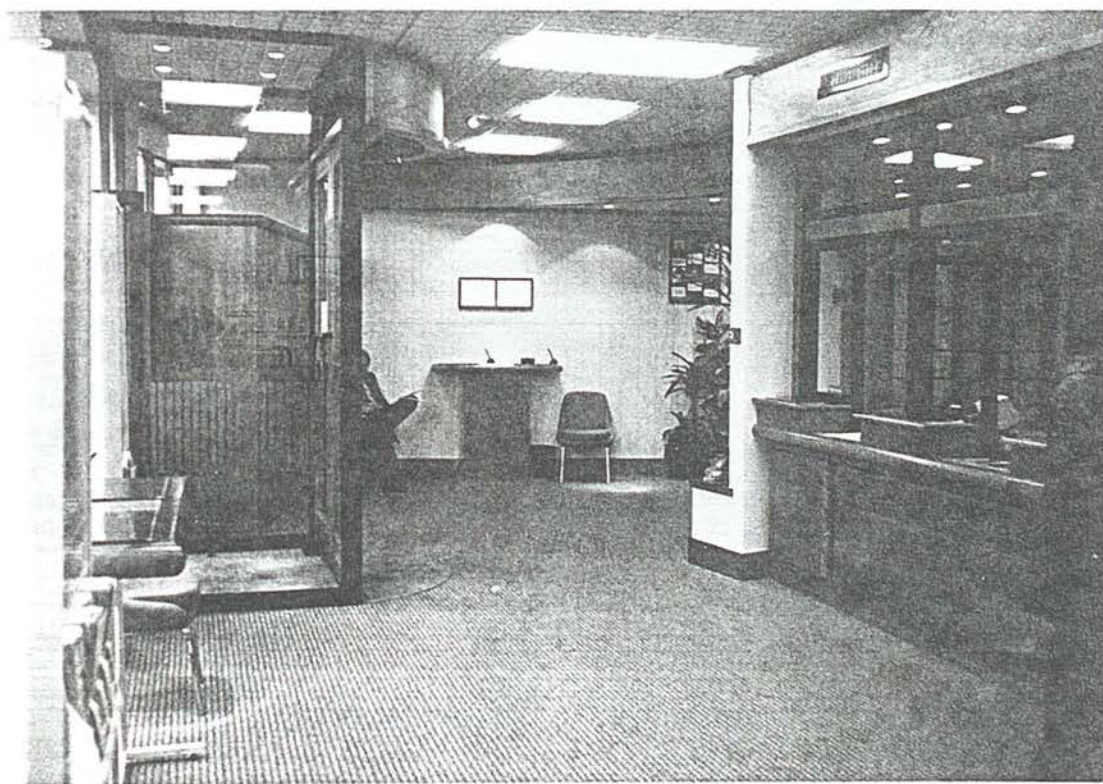


Fig. 38. Comfortable armchairs in the waiting areas are essential in the British banking interior.



Fig. 39. In Britain low-height service desks and service desks with glass protection are common.



Spanish respondents declare a general preference for smooth textures (18%), open space arrangements (14%) [fig. 40], service desks with glass protection (14%) [fig.41], comfortable armchairs in waiting areas (14%) and writing desks for clients (14%) [fig. 42], while readable signage (5%) has less importance than in the other countries and low-height service desks, rough textures, shiny surfaces, but also matt surfaces seem to be disregarded. The choice of these means aims to express according to the view of the sample comfort (18%), openness (18%), rationality (18%), authority (17%) and to a lesser extent friendliness (12%). Definitely, the above means do not aim to express affluence, consistency, independence, impersonality, stability and authority.



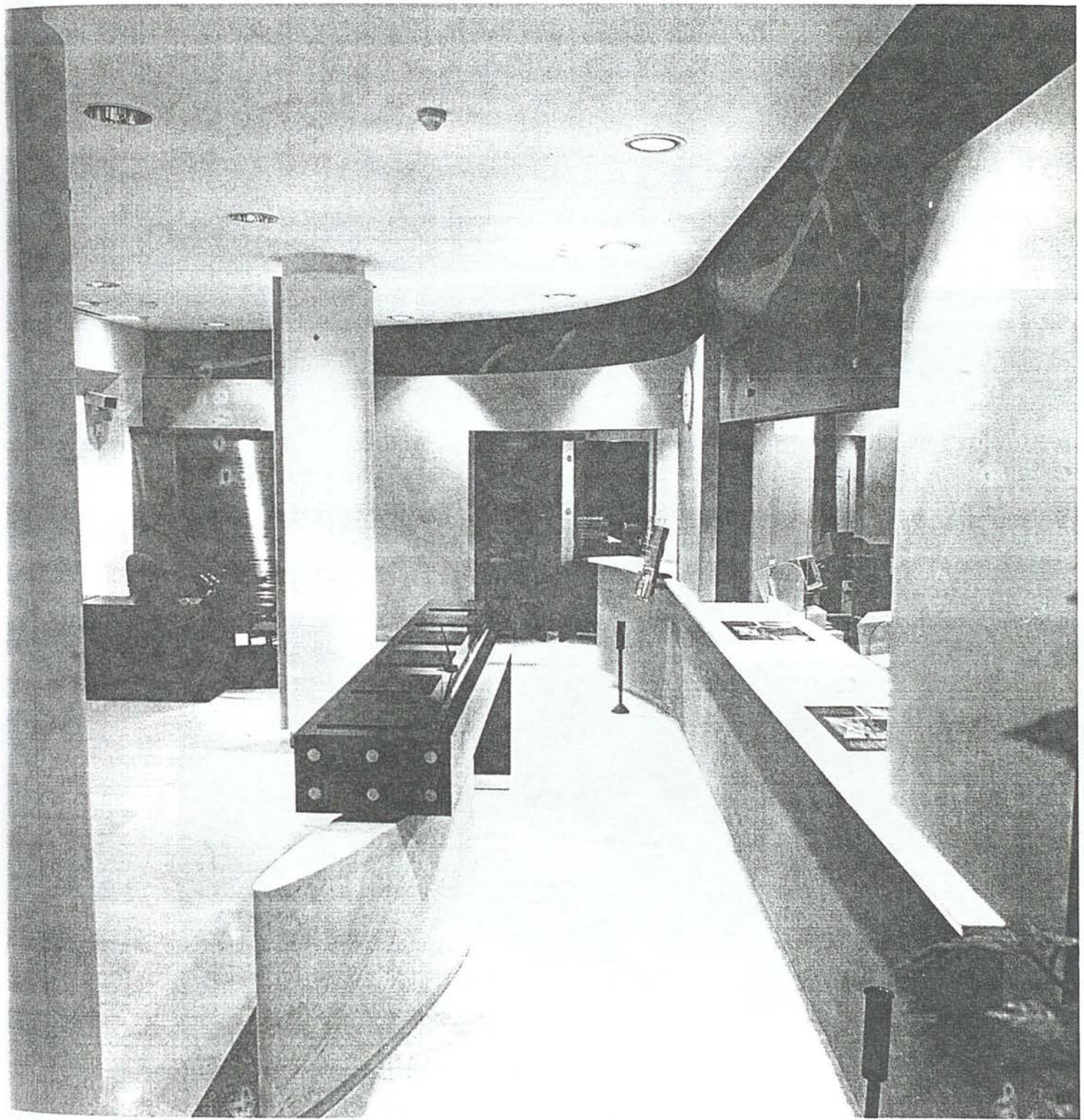
Fig. 40. Spanish respondents prefer open space arrangements in banks.





Fig. 41. Spanish respondents prefer service desks with glass protection rather than without glass protection.





**Fig. 42.** Comfortable armchairs in waiting areas and writing desks for clients are important in Spanish banks.



In Italy, on the other hand, readable signage (14%) [fig. 43] is of major importance, followed by comfortable armchairs in waiting areas (12%) [fig. 44], open space arrangement (12%), writing desks for clients (11%), smooth textures (11%), service desks without glass protection (11%) [fig. 45] and matt surfaces (9%). Shiny surfaces are less preferable (2%) and rough textures not at all. Flexibility (21%) is the most important issue aimed to be expressed by Italian banks, followed by rationality (19%), sobriety (15%), friendliness (13%) and comfort (13%). On the other hand, individuality, impersonality, authority and austerity are not signified by the layout of the working environment as it was described by the respondents.



Fig. 43. Readable signage is of major importance in Italian banks.



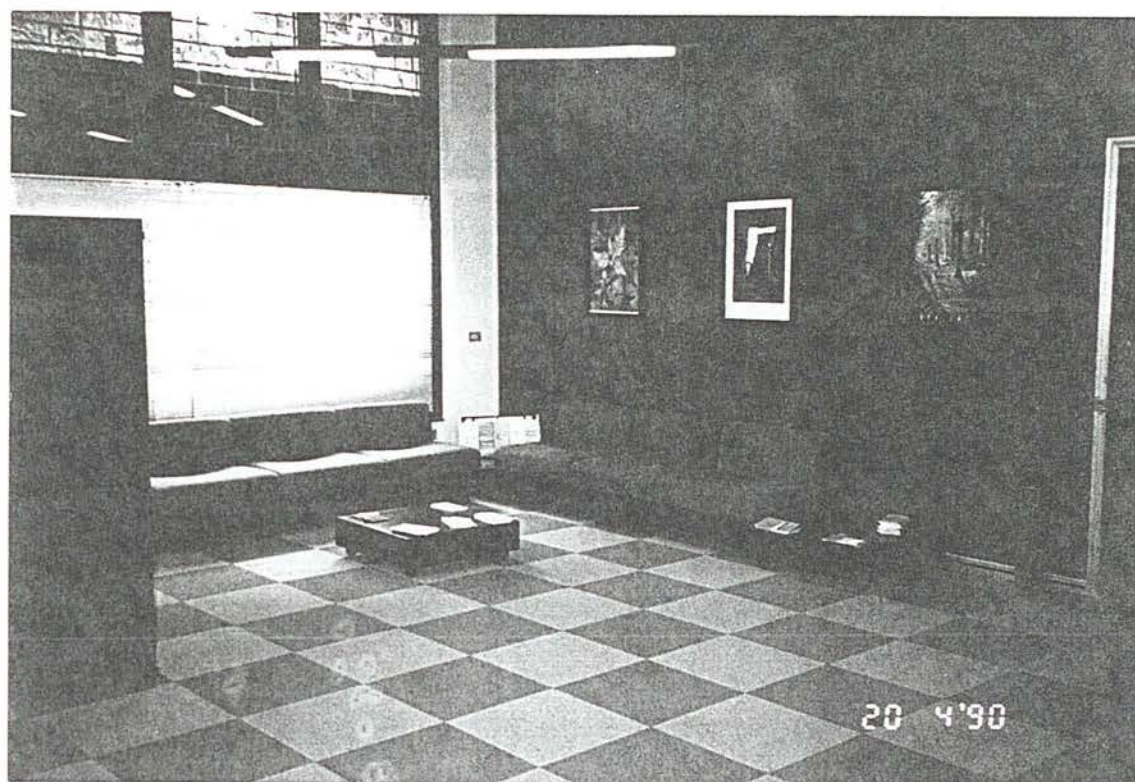


Fig. 44. Comfortable armchairs in the waiting areas is essential for the arrangement of the interior of Italian banks.



Fig. 45. Service desks without glass protection are preferred in Italian banks



Greek respondents regard comfortable armchairs in waiting areas really representative (17%) [fig. 46] of the working environment in banks, together with matt surfaces (11%) and service desks without glass protection (11%), while all the other factors are equally met (6%). Rationality and friendliness are the targets of the above arrangement of the space. The concepts of impersonality and austerity are not signified by no means in the interiors of Greek banks.

As a general attitude, according to the findings of the survey, we could notice the care for the individual, who as a client is provided by as much comfort as possible with readable signage and well organized waiting areas. An increased tendency of using service desks without glass protection and open space arrangements signify also an attempt to create a friendly environment based on personal contact, while at the same time smooth textures aim to improve this condition through the care of feelings and senses.

Hierarchy<sup>22</sup> was always an important issue in the development of the office. In contemporary banks status is delineated, according to the view of the subjects, by spaciousness, privacy and luxury. Moreover, space flexibility is indication of higher status in Greece, in Spain, in Britain, but it is regarded as desirable for lower staff in Italy and Germany. In Germany, furnishings tend to be more traditional for those having higher positions and more modern for the others. In Spain, a larger quantity of personal objects characterize the high hierarchical levels [fig. 47] and in Greece comfort is another means of differentiation characterizing mainly the high positioned employees.

---

<sup>22</sup>2nd questionnaire, 10th question: Please indicate by ticking one of the nine steps of each scale, the means by which you differentiate the working environment of employees of different hierarchical levels. (Space, Space flexibility, Privacy, Luxury, Comfort, Furnishings, Technological means, Personal objects, Surroundings, Colours).



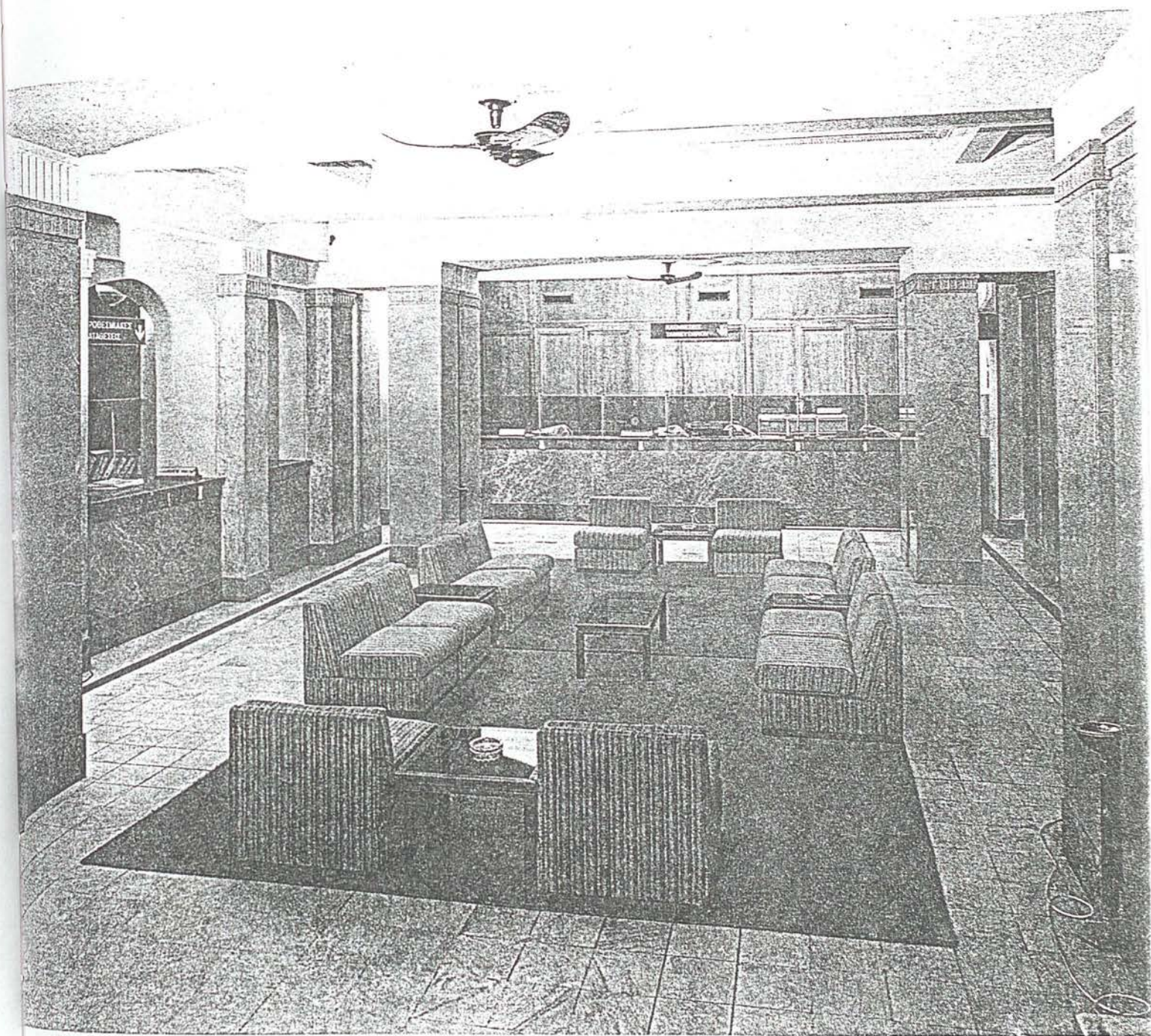


Fig. 46. Greek respondents regard comfortable armchairs in waiting areas really representative of the working environment in banks.





Fig. 47. In Spain, a large quantity of personal objects characterize the high hierarchical levels.

A relatively new aspect aimed to the emphasis of the self is designing by gender. Though this tendency is an old one in industrial production of other consuming products, application to office furniture is not widely spread. The increased managerial role of women in companies and the emphasis on image supports the creation of such items as the 'Lady' range of products targeted to women managers by Martinstoll [fig. 48]. The form attempts to maintain the status signifying elements with an elegant touch. There are used the same materials and colours as in most of similar production, that is leather and fabric in dark tones, especially black and the massive volume of the joined back and seat, that signifies steadiness, security and status. The feminine elements are the curved lines of the shape as opposed to the relatively straight ones that are aimed to men managers.



**Fig. 48.** The increased managerial role of women in companies and the emphasis on image supports the creation of such items as the 'Lady' range of products targeted to women managers by Martinstoll.



As far as furniture is concerned, a typical bank in the five countries of the sample is characterised<sup>23</sup> by products having simple form and design (15%), limited number of materials (11%), matt surfaces (9%), smooth textures (9%) and rounded shapes (8%). Moreover futuristic, low-tech, rough textures, maximised dimensions, technological effects, symbolic forms and complex form and design are not common. Beyond these general attitudes, in Britain, high-tech becomes another common characteristic (10%), in Spain combination of materials (16%) is preferable than limited number of materials (5%), in Italy craftsmanship (10%) is widely used, and in Greece light construction (14%) as well as high tech (10%) and technological effects(10%) seem to be representative.

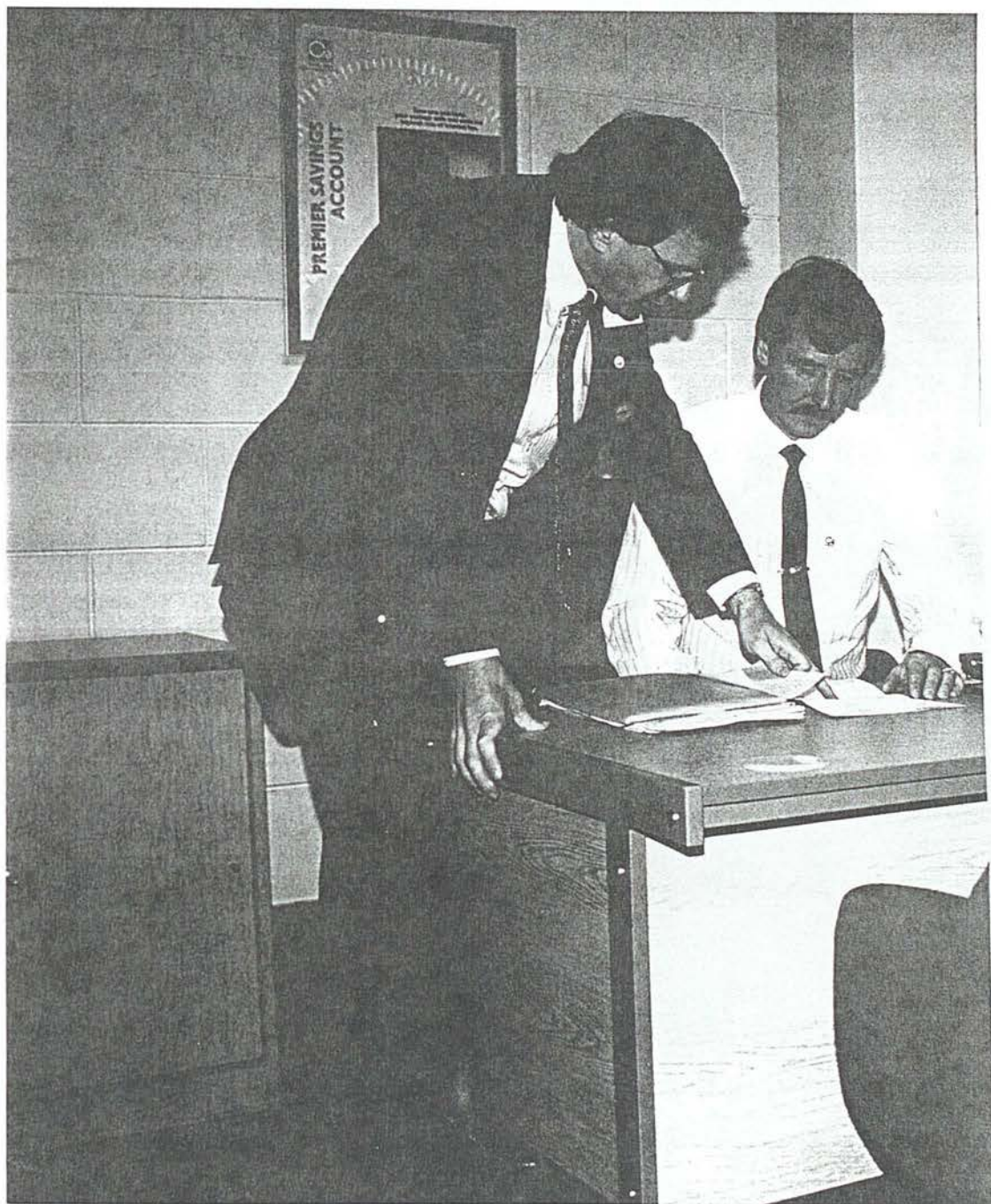
The above tendencies are interpreted by the respondents as expressions of the following concepts: friendliness (14%), flexibility (12%), comfort (11%), rationality (11%), openness (10%) and stability (10%). Impersonality, affluence, independence and authority are concepts not related to the preferences of banks as recorded in the present thesis. Particularly in Germany, stability (13%), rationality (11%), austerity (11%) and friendliness (11%) are associated with the material layout of the bank, in Britain friendliness (19%) is the most expressed concept, followed by openness (15%), stability (15%) and comfort (13%), in Spain friendliness (18%) and sobriety (18%), In Italy flexibility (23%) is the most desired and expressed concept in the whole of the sample, followed by rationality (16%), sobriety (16%) and friendliness (14%) and in Greece flexibility (12%), rationality (12%) and friendliness (12%) define the banking environment.

Design departments in banks appear to favour<sup>24</sup> to a great extent the use of

---

<sup>23</sup>2nd questionnaire, 19th question Which of the following characteristics represent best the form and the design of the furniture and equipment of your branches? (Combination of materials, Limited number of materials, Rounded shapes, Sharp edged shapes, Simple forms and Design, Complex form and Design, Symbolic forms, Technological effects, Minimised dimensions, Maximised dimensions, Smooth textures, Rough textures, Shiny surfaces, Matt surfaces, High-tech, Low-tech, Futuristic, Light construction, Heavy construction, Craftmanship, Others, No answer).

laminates (75%) [fig. 49a, b], fabrics, upholstery (67%) [fig. 50], and wood (78%) [fig. 51]. Plastics, aluminium, steel and other metals are only used to some extent.



**Fig. 49a.** Design departments in banks favour the use of laminates.

---

<sup>24</sup>2nd questionnaire, 17th question: To what extent are the following materials used in the interior design and furniture of your bank? (Steel, Aluminium, Other metals, Wood, Laminates, Leather, Fabrics - upholstery, Plastics, Glass).



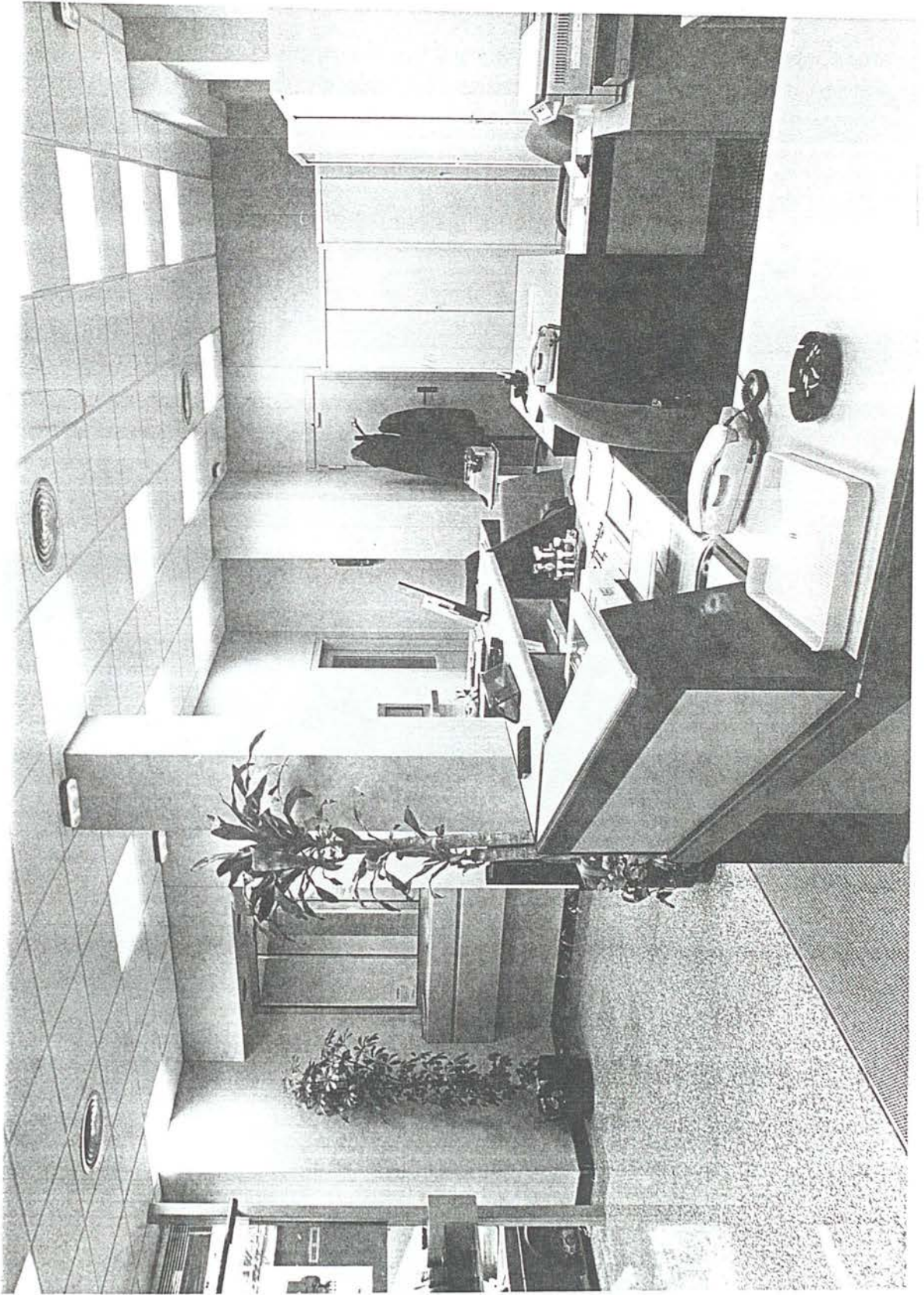


Fig. 49b. Design departments in banks favour the use of laminates.



Fig. 50. Design departments in banks favour the use of fabrics.





Fig. 51. Design departments in banks favour the use of wood.

According to the respondents' interpretation<sup>25</sup> glass implies durability (42%) and rationality (33%), but not really comfort (8%). Plastics express a rational (22%) approach but they are far from being austere (6%) and friendly (8%), fabrics are closely connected with comfort (56%), friendliness (53%) and individuality (36%). Leather is an important expressive means of affluence (50%), comfort (42%) and individuality (39%), but not of rationality (6%), laminates signify rationality (42%) and durability (33%), though they are not regarded as comfortable (6%). Wood signifies to a very great extent friendliness (83%), but also comfort (44%) and individuality (44%) and metals signify to a great extent durability and austerity.

The preferred colours for the working environment in banks are grey, white, blue and their tones: light grey 19%, white 9%, nearly white 8%, dark blue 6%, light brown 5%, pastel green 5%, pastel red 5%, pastel blue 4%, dark grey 3%, black 3%, light blue 3%, pastel yellow 3%. The rest of the colours are used in smaller amounts. These colours are generally associated with friendliness (14%), flexibility (11%), rationality (11%) and openness (11%).

In Greece the most usual colours in bank interiors are white (20%), light grey (13%), light brown (13%), to a lesser extent pastel orange, pastel purple and pastel green, dark brown, dark green, dark blue and bright red, while yellow is avoided. Stability (14%) is associated with the above but not impersonality and austerity.

In Italy blue (22%), white (18%), grey (20%), green (14%), black (8%) and brown (8%) are the most common colours but orange and purple are avoided and yellow and red are used only in their pastel tones. The concepts that Italian respondents associate with the choice of the particular colours, are rationality (19%), flexibility (16%), sobriety (16%) and friendliness (14%) while they think impersonality, individuality, austerity and

---

<sup>25</sup>2nd questionnaire, 18th question : Please indicate which of the indicated materials (steel, aluminium, other metals, wood, laminates, leather, fabrics, plastics, glass) are in your opinion related to the following concepts (friendliness, austerity, rationality, individuality, affluence, comfort, durability).



authority are not related to them.

In Spain nearly white and light grey are very common (15%) and dark grey, brown, black, dark purple, dark blue, light blue, bright green, bright red, and pastel yellow, are also used, but orange is completely avoided. Comfort (17%), openness (17%), sobriety (17%) and rationality(17%) are mainly interpreted as associative concepts.

In Britain white is used less than in other countries (11%), light grey is very common (22%), as well as pastel red (14%). As a general comment dark colours are avoided and pastel tones of most colours are used. Friendliness (20%) is basically associated to these colours and to a lesser extent openness (15%) and flexibility (15%).

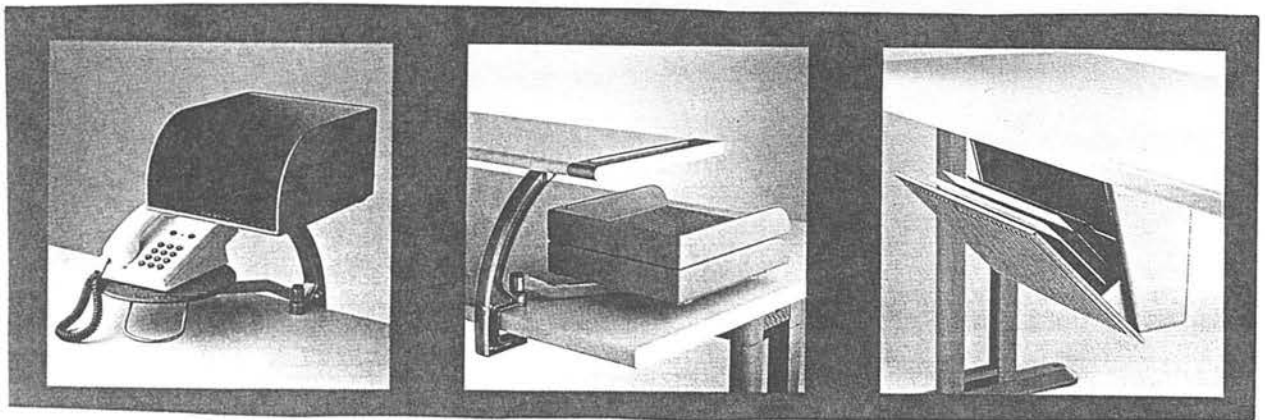
In Germany light grey (21%) is also the most favourable colour, followed by white (18%). Dark colours are common to some extent :brown, purple, green, blue, grey and black. Light tones of most colours are also in use. Stability (12%) and rationality (12%), austerity (12%) but also friendliness (12%) are seen as concepts related to the particular use of colours.

In their interpretation of office furniture production, office furniture manufacturers in the five countries of the sample seem to associate<sup>26</sup> bright colours with individuality (15%) and innovation (13%), dark colours with status (16%) and luxury (15%), pastel colours with innovation (11%), wood with luxury (36%), status (38%), individuality (18%) and durability (18%), metals with durability (34%), functionality (21%) and flexibility (18%), glass with status (15%), luxury (13%) and innovation (11%), leather

---

<sup>26</sup>1st questionnaire, 14th question: By which of the indicated means (bright colours, dark colours, pastel colours, wood, metal, glass, leather, plastic, laminates, upholstery, combination of materials, limited number of materials, simple form and design, complex form and design, light construction, heavy construction, rounded shapes, sharp edged shapes, technological effects, craftsmanship, minimised dimensions, maximised dimensions, variety in seating positions, accessories, symbolic forms) have the following concepts and attributes (luxury, comfort, status, durability, functionality, flexibility, individuality, informality-relaxation, austerity, innovation, others) been reflected in your production?

with status (36%) and luxury (36%), plastics with functionality (13%), laminates with durability (26%), functionality (21%), and flexibility (16%), fabrics - upholstery with comfort (25%), combination of materials with functionality (25%), durability (20%) and status (20%), simple form and design with functionality (31%), complex form and design with status (21%), light construction with functionality (16%), heavy construction with durability (21%), rounded shapes with comfort (23%), luxury (18%), functionality (16%) and individuality (15%), technological effects with functionality (26%), flexibility (23%) and innovation (26%), craftsmanship with durability (28%) and luxury (25%), minimized dimensions with functionality (11%), maximised dimensions with luxury (15%) and status (13%), variety in seating position with comfort (23%), functionality (21%) and flexibility (18%) and accessories [fig. 52] with innovation (13%).



**Fig. 52.** In their interpretation of office furniture production, office furniture manufacturers in the five countries of the sample seem to associate accessories with innovation.



#### **4.6. Associations of Material Substances and their Immaterial Properties in the Contemporary Office.**

The findings of the pilot study, interpreted by the author, present signification models in the office furniture system. Five separate categories are examined a) Materials, b) Colours and Shading, c) Textural attributes, d) Formal manipulations, e) Construction and Technology.

##### **4.6.1 Materials.**

The material that an object is made of is related to concepts that occur because of a number of associations. Materials beyond the denoted origin and process, connote a variety of things about their social content and the relationship between senses and feelings.

Wood: It is seen as signifier of such concepts as friendliness, comfort and individuality. It denotes natural origin, connoting so friendliness towards the environment, attachment to the tradition and therefore familiarity. Physical but mainly psychological comfort characterize it, as people are familiar to the material, its process and its properties. Additionally, its form and finish, denoting either craft process or mass production, connote respectively intuition, the warmth of human touch (friendliness, comfort) and the value of human involvement, or accessibility (it is strong for the purpose of use, but at the same time soft and easily manageable). It is often used as signal of status and wealth (as both designers and users accept its processing and self-value). In touch it is warm, a significant form that is connected with the meanings of comfort and warmth in feelings. [fig. 53 a]

Metals: They signify austerity, durability and rationality. Hardness and heaviness are significant forms related to the meaning of inflexibility and consequently to austerity,

but also to durability. The plain, sleek forms of metal compartments in some contemporary office furniture products, connoting the inflexibility, sobriety and impersonality of mass production, become signals of rational attitude. To overcome impersonality, contemporary designers often use organic forms with rounded shapes, sophisticated methods of process and matt or "soft" finish. [fig. 53b]

Glass: Durability, rationality and friendliness are seen as signifieds of this material. While denoting a material that is clear, it connotes rationality probably because of the fact that reality is directly perceptible through its mass. At the same time its clarity, by not becoming a barrier between people, is a significant form related to friendliness. Hardness as a significant form and sophisticated methods of contemporary production made glass associated with durability, especially in bank architecture. It is obvious here the change in the signification system due to the object of other systems (technological evolution); glass is not seen anymore in architecture as a fragile material.

Leather: The concepts of comfort, affluence, individuality, and austerity are regarded as signifieds of this particular material. Comfort and individuality are connotations of the denoted "material for lining", because of its naturality and its significant forms of softness and flexibility. Things that are related to its social context, such as its limited sources and its difficult processing, arise its cost and consequently its value, signifying so affluence and status. In a following level of signification the above because they are related to the concept of authority connote austerity. The plain and undecorated surface of the particular kind of leather used in offices, contributes also to the connotation of the last concept. [fig. 53c]





**Fig. 53a.** Wood is connected with the meanings of comfort and warmth in feelings.



**Fig. 53b.** To overcome impersonality in metal furniture, contemporary designers often use organic forms with rounded shapes, sophisticated methods of process and matt or "soft" finish.



**Fig. 53c.** The plain and undecorated surface of the particular kind of leather used in offices, contributes also to the connotation of the the concepts of authority and austerity.

Plastics: They are seen as rational, but neither friendly, nor austere. Their artificial substance, in the contemporary context of a "back to natural sources" move, connotes unfriendliness towards the environment and indicate the same towards people. Mass production and therefore cheapness connote an opposed to austerity concept. Additionally the sleek finish, the indifferent relationship with human senses and the light weight forms become significant forms related to rationality. [fig. 53d]

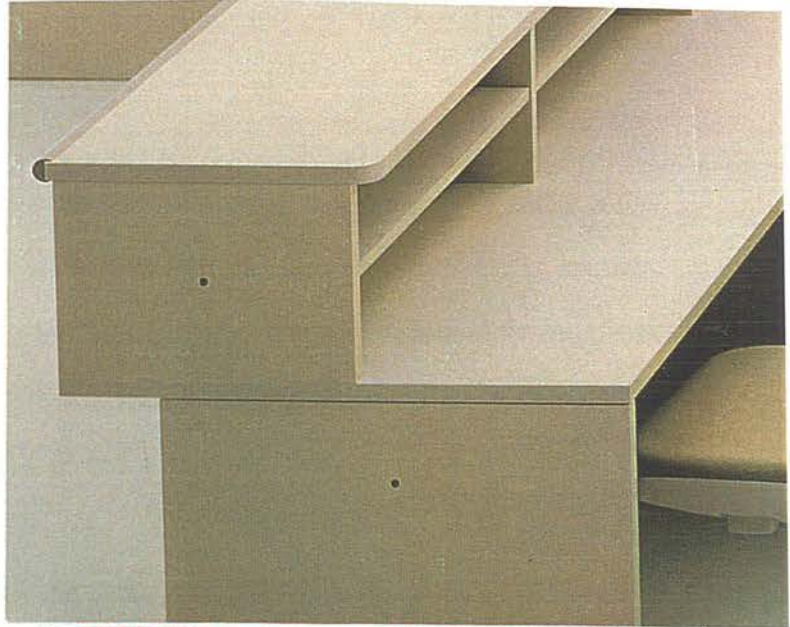
Laminates: Rationality and comfort are signified by this polymorphous material mainly because of its adaptability and easy maintenance. [fig. 53e]

Fabrics, upholstery: Comfort, friendliness and individuality are the main signifieds of this material. Its natural origin and the significant forms of softness, warmth and non sleekness become signals of friendliness and comfort. Human interference in many stages of its production and the variety in colours and patterns create unique results and connote thus the concept of individuality. [fig. 53f]





**Fig. 53d.** The sleek finish, the indifferent relationship with human senses and the light weight forms of plastic furniture become significant forms related to rationality.



**Fig. 53e.** Rationality and comfort are signified by laminates mainly because of its adaptability and easy maintenance.



**Fig. 53f.** Human interference in many stages of the production of fabrics and the variety in colours and patterns create unique results and connote thus the concept of individuality.

#### 4.6.2 Colours and Shading.

An important element in visual communication is colour. It was always used as a means for associations. The colours of paints used in the past were determined by the natural sources. Green, dark blue or brown ranges were readily available while red or purple ones were rare and thus expensive, obtainable by heads of social hierarchies.

Many scientists like Munsell, Ostwald and Hering (2) formulated theories on colours. The Munsell system examines colours in terms of hue, value and chroma. Hue is what is meant by the word 'colour', value refers to the brightness of a colour and chroma measures the intensity of hue as a distinction between a more saturated or a less saturated one.

Hering introduced the Four-colour theory as opposed to the Trichromatic Young-Helmholtz theory, that declares two pairs of sensations acting as opponents, namely yellow/blue and red/green, where black and white differences are explained as variations of brightness of a pair without hue or chroma. Minor differences of colour sensitivity are often even among normal people without defective colour vision.

Though colour distinctions in all the three dimensions can be count in thousands and many of them can be seen by the human eye, its impossible to name each one. However, naming colours is necessary in order to produce in our minds fair approximations of colours that we don't have in front of our eyes at that time. For specific art purposes a spatial system of value and chroma gradations of the different hues can provide an extensive code, which seems to be inappropriate in every day life communication. Munsell developed a system of ten hues that could be expanded to one hundred, nine values that could be expanded to nineteen and also intensity gradations. The whole system resembled a compact three-dimensional universe with colours participating as fixed stars in it, which was able to express fine colour distinctions



For the purposes of this study the author used a seven hue system (red, yellow, blue, green, purple, orange, brown), in addition to black and white as well as value and chroma gradations (correspondingly: bright to pastel and dark to light) as a means of communication between the author and the subjects. A correlation between colours and concepts is asked by the subjects though in a very abstract form. A more thorough examination would demand an interview beyond the limits of this study.

Besides the difficulty of objectivity in the naming of colours there are also other factors that influence colour sensation: surfaces, background and lighting. Surfaces reflect and absorb light in different analogies according to their texture, that results in the differentiation of the colour sensation ie surfaces coloured with the same colour pigments but having different texture give a very different final colour result. Additionally, a surface can change in colour because it has been placed in a different environment, in which its relationship to other coloured surfaces has been altered.

Lighting, natural or artificial induces change the colour of surfaces. Natural daylight is the best light source to examine the real colour of objects, but this is an ideal. Its source, the sun provides a number of angles of illumination, which with other atmospheric disturbances provide an unreliable condition. Artificial lighting, such as the usual tungsten bulbs though it could be more easily controlled differs from the north daylight which is considered as an ideal source, by being less blue. This affects the colour of objects by making them look stronger in yellow. Fluorescent lighting resembles more the north daylight and it is extensively used in public buildings and offices (3).

A usual distinction between colours is warm-cool. Red, orange, yellow are regarded as warm, while blue, blue-green and blue- purple are regarded as cool. Also dark colours seem to be seen as warm colours There is a logical explanation of this as dark coloured surfaces absorb a higher percentage of light. This also means that the value of a colour is associated with temperature. Libby (4), though acknowledging the

existence of warm and cool hues declares that temperature and colour are different kinds of sensation that we have learned to reconcile making emotional and symbolical associations between visual and tactile stimulations. We associate then through experience, the colour of the sun, fire or blood with warm feelings and the blue of the sea with cool ones. According to the above, warm hues are identified with aggressive, vital and violent experiences, while cool hues are extensively used to symbolize the intellectual, the tranquil and the dispirited.

Extensive experiments through the years show that colour preference change according to time, gender, culture and so on. For example, according to Walton and the Guilfords, red declined in its strength of preference for both men and women between 1910 and 1917 but recovered to an even stronger position after 1928. They also found that women preferred yellow to orange, while men orange to yellow. Bullough (5) developed four aspects that explain colour preferences: a) the objective aspect, that is the qualities of the colour itself (hue, brightness, saturation); b) the physiological aspect, that refers to the positive or negative abilities of a colour to influence bodily functions and activities e.g. warming, depressing etc; c) the associative aspect that has to do with association of a colour with personal memories and experience; d) the character aspect deals with associations between a colour and characteristics of personality e.g jovial, energetic.

In 1959 Guilford and Smith experimented on colour preferences with differentiation in hue, value and chroma (6). According to their results there is a positive relationship between increasing brightness and pleasantness, as well as increasing saturation and pleasantness. With regard to hue blues and greens were given the highest ratings for pleasantness and yellows the lowest. As far as combinations are concerned Togrol (7) found through experiments that a pleasant pair is one with hue differences of two units, brightness difference of three units and no chroma or saturation difference.



Experiments on association of colours with feelings by Wexner (8) showed the following: exciting - red, yellow or orange; secure - blue, brown or green; distressed - orange or black; tender - blue or green; protective - red or brown; despondent - black or brown; calm - blue or green; dignified - purple or black; cheerful - yellow or red; defiant - red, orange or black; powerful - black or red. In a similar experiment Murray and Deabler (9) found that socioeconomic differences of subjects was the major factor for different choices of colours to go with given mood tones

According to the present research association between colours and concepts has as follows:

Dark shades: They are regarded as signals of luxury, status and austerity. Being associated with fright and sadness the dark series of colours are signifiers of serious situations signifying at a first connotative level austerity [fig. 54]. Austerity is associated with status, concept that at a following connotative level signifies luxury.

Bright shades: The significant form of bright colours is related to the meanings of individuality, innovation and informality. Contrary to the dark ones the bright shades are playful and thus associated with informality. Attracting the sight avoid being impersonal and therefore become indicators and very often intentional indicators of an individual synthesis. Additionally, youth is "bright" and "loud" and therefore bright appearance is the best expression of new things that is innovation.

Pastel / light shades: They become signifiers of the concepts of comfort, functionality, flexibility, informality and innovation. [fig. 55] At the denotative level they are seen as the mixture of a bright or dark colour with white. At the first connotative level they signify tempered and adjustable attitude and consequently flexibility. A flexible environment becomes functional and comfortable as it suits the needs of most people and therefore is characterised as friendly. Friendliness is also an indicator of informality.



**Fig. 54.** Dark shades are regarded as signals of luxury, status and austerity. Being associated with fright and sadness, the dark series of colours are signifiers of serious situations signifying at a first connotative level austerity.





**Fig. 55.** Pastel / light shades become signifiers of the concepts of comfort, functionality, flexibility, informality and innovation.

The above interpretation explains the preference of the respondents for light greys, whites and nearly whites, dark blues and the light or pastel shades of brown, green, red and blue because they are associated with friendliness, flexibility, rationality, openness, comfort, stability, and sobriety being the most appreciated concepts sought to be projected by the working environment in banks. The rather neutral tones of light greys and whites and the dark blue are desirable as they express sobriety, stability and rationality. However, the light and pastel tones especially those of "soft" colours such as brown, green and red, are equally necessary as they signify the most important concepts of friendliness, flexibility, openness and comfort.

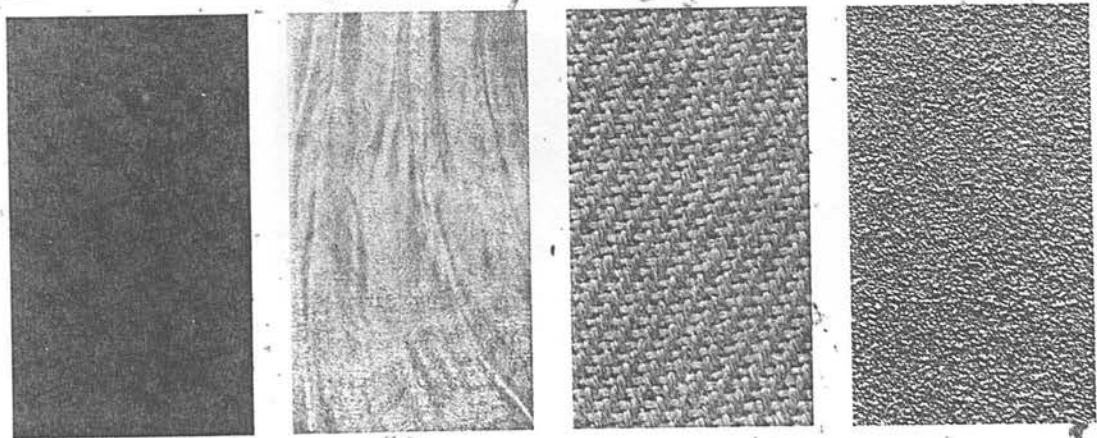
#### **4.6.3 Textural Attributes.**

Recently is given great importance to the comfort of the human body. There is a tendency of differentiation of the individual's place from the outside "wild" world. The objects are designed to be friendlier to the user. Therefore, texture and finish are the most appropriate means to provide this concept by tactile sensation. According to the case study, smooth textures and matt finishes are more preferable than the rough textures, or the shiny finishes. Finishing coatings apply to almost all the surfaces within a given space and especially furniture, for protective but also for decorative reasons. According to Dean (10) the overall colour and opacity of a surface coating is dependent on the properties of pigments, and not just their body colour (ie the selective wavelengths of light they do not absorb), but the actual particle size of the pigment and how it physically distributes light. Dean distinguishes textures of surfaces into two categories: smooth and rough.

Smooth or fine textures could characterize either hard or soft surfaces. Hard surfaces like marble and glass, due to their minor surface irregularities, reflect light to a great extent absorbing just a limited amount. The result is a rather shiny surface. Soft surfaces, having small scale surface irregularities allow higher absorbency and consequently limited reflection. This results in a great intensity of colour on the material.

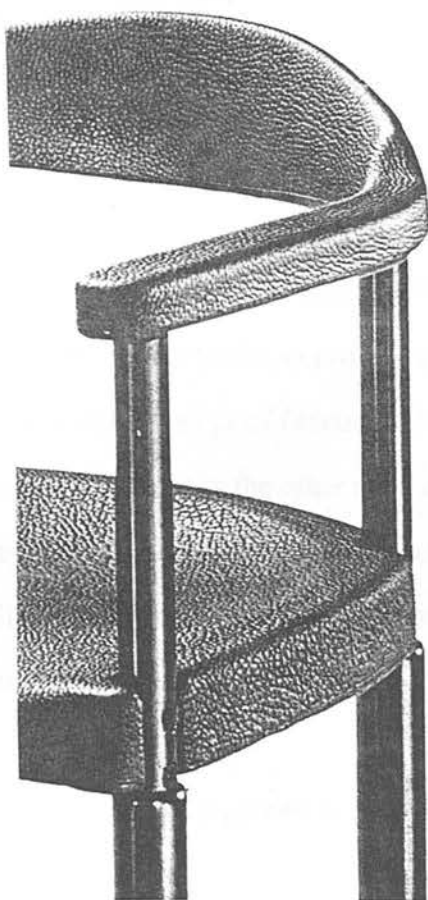


It is a significant form associated with the meanings of friendliness, comfort and openness. Denoting the sense of the human touch it connotes friendly feelings and positive attitude. [fig. 56] .The material comfort with the friendly attitude create in a second connotative level psychological comfort and therefore a feeling of trust and openness.



**Fig. 56.** Smooth or fine textures denote the sense of the human touch and connote friendly feelings and positive attitude.

Rough textures due to their uneven surface reflectance give a great vibrancy to colour and a wide range of tones. Associated with raw materials become a signifier of primitiveness and thus, a signal of rough but frank feelings. [fig. 57]



**Fig. 57.** Rough textures become a signifier of primitiveness and a signal of rough but frank feelings.



Shiny finish is regarded as a signifier of rationality and austerity. Sleekness denotes a direct and absolute formal expression and as such it connotes rationality. Acting as a mirror and showing obviously any touch marks creates a kind of fear and one's real and psychological need to be in a distance, which in combination with the plain forms where it is usually applied, signifies also austerity.

On the contrary, matt finish is not direct and absolute. It is "softer" in sight and more functional as it permits touch without showing marks, which make it more approachable and connote to a greater extent friendliness and comfort than the shiny one.

#### **4.6.4 Formal Manipulations**

Form is the mean by which the material environment is visually perceived.

Form and design: Simple form and design acts as a signifier of functionality and comfort. [fig. 58] In comparison to the complex one it gives the possibility of more alternatives, signifying so the concept of functionality. Denoting adjustability to various combinations it connotes comfort. On the other hand complex form and design, being the combination of many techniques, materials and forms produces a more unique result that connotes individuality. Individuality is often the privilege of the few as opposed to the mass and thus it connotes status at a following connotative level.

Shape: Rounded shapes are regarded as signals of comfort, luxury, functionality and individuality. [fig. 59] Denoting either craftsmanship, or sophisticated mass production, they connote luxury and individuality. Sharp edged shapes because they are naturally more dangerous than the rounded ones, create a psychological and a real discomfort and become a signal of unfriendliness and austerity. [fig. 60] Because of that, sharp shapes are avoided in the working interiors and curved surfaces seem to express more successfully friendliness and comfort.



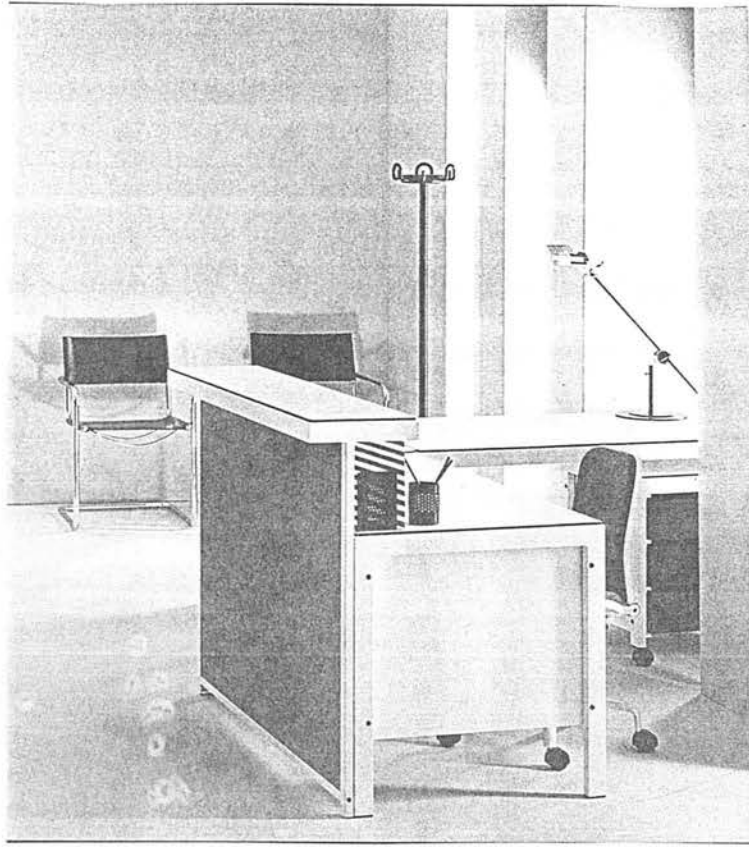
Fig. 58. Simple form and design acts as a signifier of functionality and comfort.





OC

Fig. 59. Rounded shapes are regarded as signals of comfort, luxury, functionality and individuality.



**Fig. 60.** Sharp edged shapes because they are naturally more dangerous than the rounded ones, create a psychological and a real discomfort and become a signal of unfriendliness and austerity.

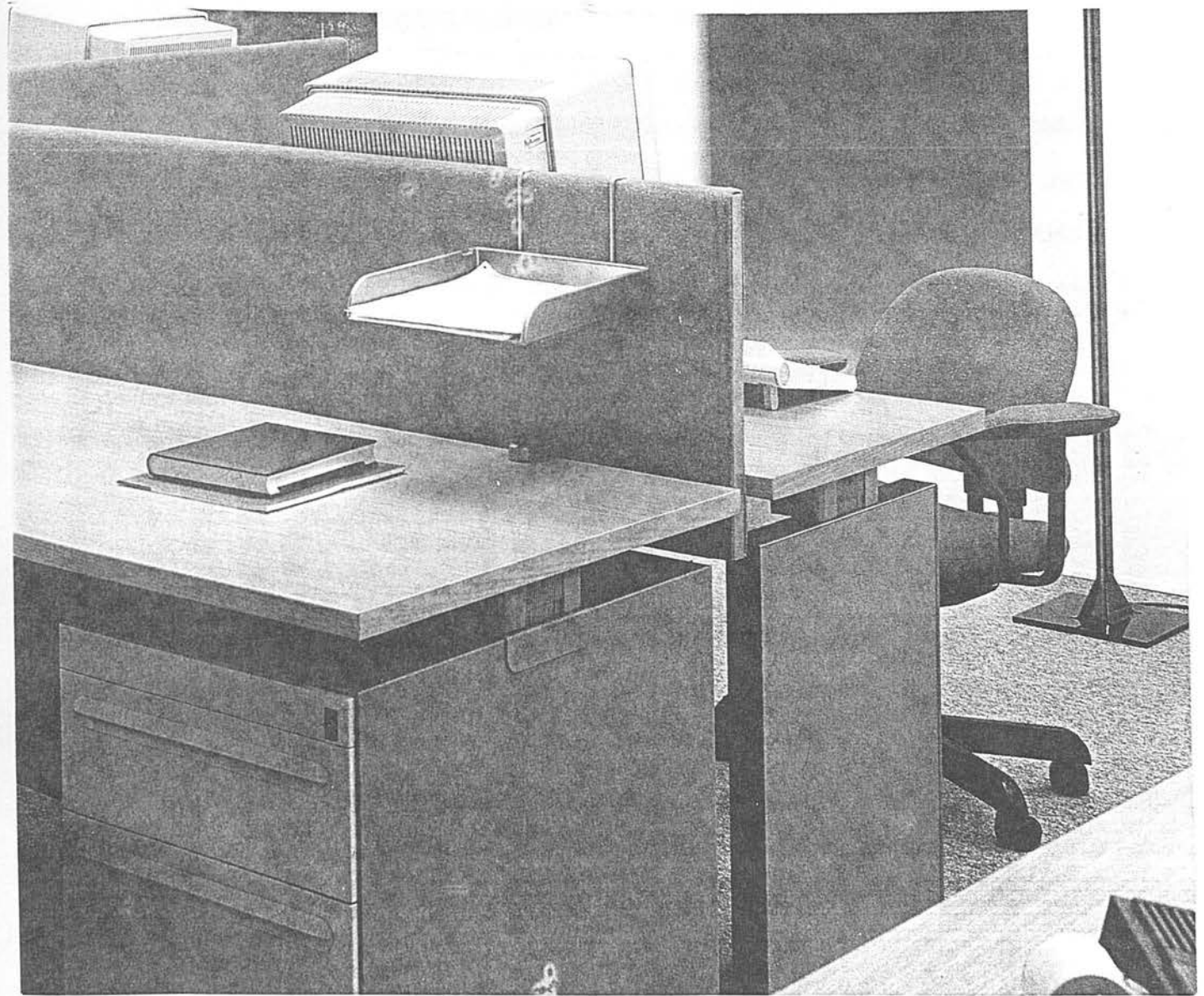
**Size:** An object having a big size denotes the occupation of more space and the need of space flexibility, which connote comfort and become at a following connotative level signals of luxury and status. On the other hand, small sizes are easy to arrange and less demanding in space and thus more functional and flexible.

The findings of the study showed that friendliness, flexibility, comfort, rationality, openness and stability are desirable concepts, while impersonality, authority and austerity are not. This attitude explains the general preference for simple forms and design, rounded shapes and minimized dimensions that act as signifiers of the above in the contemporary working environment..



#### 4.6.5 Construction and Technology.

Combination of materials: Plethora of materials in the design of an object signify ambitious design, sophisticated production, or craftsmanship, and become signals of status and luxury. It also give the possibility of many alternatives in terms of combination with other objects in a room, signifying so functionality and flexibility. [fig. 61] Limited number of materials in an object's form on the other hand, connotes a spirit of conservatism and rationality and becomes a signal of austerity.



**Fig. 61.** Plethora of materials in the design of an object signify ambitious design, sophisticated production, or craftsmanship, and become signals of status and luxury. It also give the possibility of many alternatives in terms of combination with other objects in a room, signifying so functionality and flexibility.

Construction: Light construction objects because of this particular property signify functionality, flexibility and innovation. Heavy construction denoting strong structure connotes durability . As it is usually associated with big size it becomes also a signal of status and luxury.

Technology: High tech constructions and technological effects denote use of the latest technological methods and connote innovation, progress and as far as the working environment is concerned better service. For these reasons they are associated with the concepts of functionality and flexibility.

Craftsmanship: While use of technology connotes service quality and active attitude, craftsmanship supporting the traditional values, improves the status and one's image denoting human work and personal involvement, things that are regarded as valuable in terms of material and immaterial estimation. Therefore it is regarded as a signal of status and luxury. As human products are never perfectly the same, craft objects become signals of individuality, but at the same time due to the general confidence in men's work they become also signals of durability.



## REFERENCES

- (1) Del Coates, "Measuring Product Semantics with a Computer", in *Innovation*, vol. 7, no 4, (Fall 1988), pp. 7-10.
- (2) R.W. Pickford, *Psychology and Visual Aesthetics*, (London: Hutchinson, 1972), p.65.
- (3) *ibid.*, p.71.
- (4) William Charles Libby, *Colour and the Structural Sense*, (London: Prentice Hall Inc., 1974), p. 58.
- (5) R.W. Pickford, *op.cit.*, p. 86.
- (6) *ibid.*, p. 78.
- (7) *ibid.*, p. 79.
- (8) *ibid.*, p. 93.
- (9) *ibid.*, p. 93.
- (10) Yvonne Dean, *Finishes: Mitchell's Building Series*, (London: Mitchell, 1989), p. 31.

## **5. CONTEMPORARY EUROPE AND ITS ASSOCIATED VALUES AS SIGNIFIED IN THE DESIGN OF OFFICE INTERIORS IN BANKS.**

This final chapter gives an overview of the study. The data from the survey has been applied to the model introduced in Chapter One in order to identify the aesthetic tendencies and characteristic forms in contemporary office furniture designed for use in banks within countries of the European Community.

Design in the 1980s was closely associated with consumerism as ownership of everyday things became a necessity for the satisfaction of the European consumer. Design was extensively used as a marketing instrument in order to advertise life-styles rather than products. Though material things dominated western consumer's life, it was not their material substance that determined their value, but rather their conceptual content. Watches, pens, furniture, cars were acquired in order to signify newness and uniqueness. Individuals were striving to reassure participation in culture by buying, and seeking for security under a social identification in order to balance an unstable world around them.

Objects were extensively used as visual metaphors, a tendency which was supported by the liberation of form from technological constraints, due to the progress in the field of electronics. The role of the designer especially as stylist became very important. The designer's personality was promoted together with the image of the product. The achievements of technology, the formal manipulations and new sophisticated materials (especially plastics) gave objects their new identity. Products became portable and light but powerful, flexible, with increased number of tasks to perform, user friendly and with characteristics that give an impulse to subjective interpretations. The latter was supported by the possibility of limited production in cost-effective quantities by firms that were increasingly regarded as cultural institutions.

All the countries of the European Community participated actively in this new face



of industrial production. Italy was supported by firms that produced objects with strong identity and by a social background that favoured innovation. Spain gained an important place in Europe due to an economic improvement of the state that supported design and industrial production. Germany, and to some extent Britain realised the new relationships between design and consumerism and adjusted their firms and consultancies according to the modern demands. In Greece where the economic situation was very unstable, individuals became more design aware, regarding designed objects as consumer goods and expecting design to provide them with a social identification that would permit them to participate in Europe's culture.

The office of the 1980s in the European Community became a mirror of the tendencies and the demands of the particular society. In the thesis, the design of the contemporary office environment is examined as a focus for the aspects of modern sociocultural system and as a signification system between people and infrastructure.

### **5.1. Application of Model of Analysis to the Particular Area.**

The model introduced in the first chapter provides the means for the method of investigation of the contemporary office furniture and bank interiors [table 3], and it will be the basis for this overview, complemented by the information of the study findings and the background theory. Moreover, the form of contemporary office furniture products is examined according to the social, cultural, economic, legislative, political and technological aspects of the last years as shown below:

#### **5.1.1. Functional Factors.**

Functional factors concern the demands of the work achieved within the contemporary office, which have to be fulfilled by office furniture and interiors. Working on computer terminals presupposes more space to host the devices, as well as space for

more conventional types of work like writing or filing. Working surfaces have to be durable enough to carry the excess weight and resist damage from the metallic parts of computers, facsimiles, photocopiers and so on. A certain level of noise by terminals and keyboards makes privacy desirable to some extent. Writing on a desk and writing on a keyboard demand different heights as far as the working surface is concerned, according to data in the field of ergonomics. Beyond health and safety requirements, adjustability of the chair facilitates the employee's task, especially when working at a service desk or teller. Mobility within the personal working area in order to reach the various devices is rather more important than outside it. Castors on the chair, but also comfortable material become essential for the body of the sedentary office-employee. The various technological devices carry with them a high number of cables, so that the question of danger arises beyond aesthetic matters. Cable management solves most of the problems.

### **5.1.2. Technological Factors.**

They include all the radical developments in electronics that introduced a number of new components, but also decreased the size of the existing ones. Adjustability in desks and chairs presupposes the existence of a relevant infrastructure, a technological development aimed directly at the office. Environmental friendly products presuppose the use of appropriate materials and methods of production. The use of wood from the tropical forests is forbidden and recycling methods are important. Plastics, as known in the 1960s, are limited, seen on the one hand as an environmental villain, and on the other as a connotation of kitsch in design. They were replaced by advanced artificial materials<sup>1</sup>, that although they are plastics, they have lost some of their past

---

<sup>1</sup> Ezio Manzini in his book *The Material of Invention, Materials and Design*, discusses the properties of recently developed categories of plastics that dominate the contemporary technological production. Such materials are polymers, superpolymers, plastics with conductive properties and application to electroluminescent systems, plastics with qualities of heat resistance and resistance to various chemical agents, liquid crystal polymers and composites. By the latter term Manzini defines those materials created in one or more phases of the manufacturing process, during which different elementary components are profoundly integrated, so as to constitute a new element whose performance exceeds those of the single materials employed in its production.



connotations. Their unique qualities, revealed and developed by the acceleration of technological progress, introduced to the office environment a range of user-friendly materials that fulfill unexpected demands under a new identity without precedents. Additionally, natural materials, such as wood and metals, have been developed under technological advances to reach high performance standards. Moreover technological progress made batch production economically reasonable.

### **5.1.3. Social Factors.**

Social factors include all the characteristics of the social structure of the European Community in the 1980s, as described in chapter 2. The rise in employment in the services sector changed the social structure of European countries, questioning the older class system. Life styles became an alternative means of categorisation. Mass media, according to life style psychology, determined demands in material consumption. The office changed in terms of type of work as well as appearance. The characteristics of the material substance of the office were used to signify values required by society. So, stability, friendliness and care for the individual were the main targets of financial institutions. Environmental problems created a turn to nature and green issues became an important subject in the design process

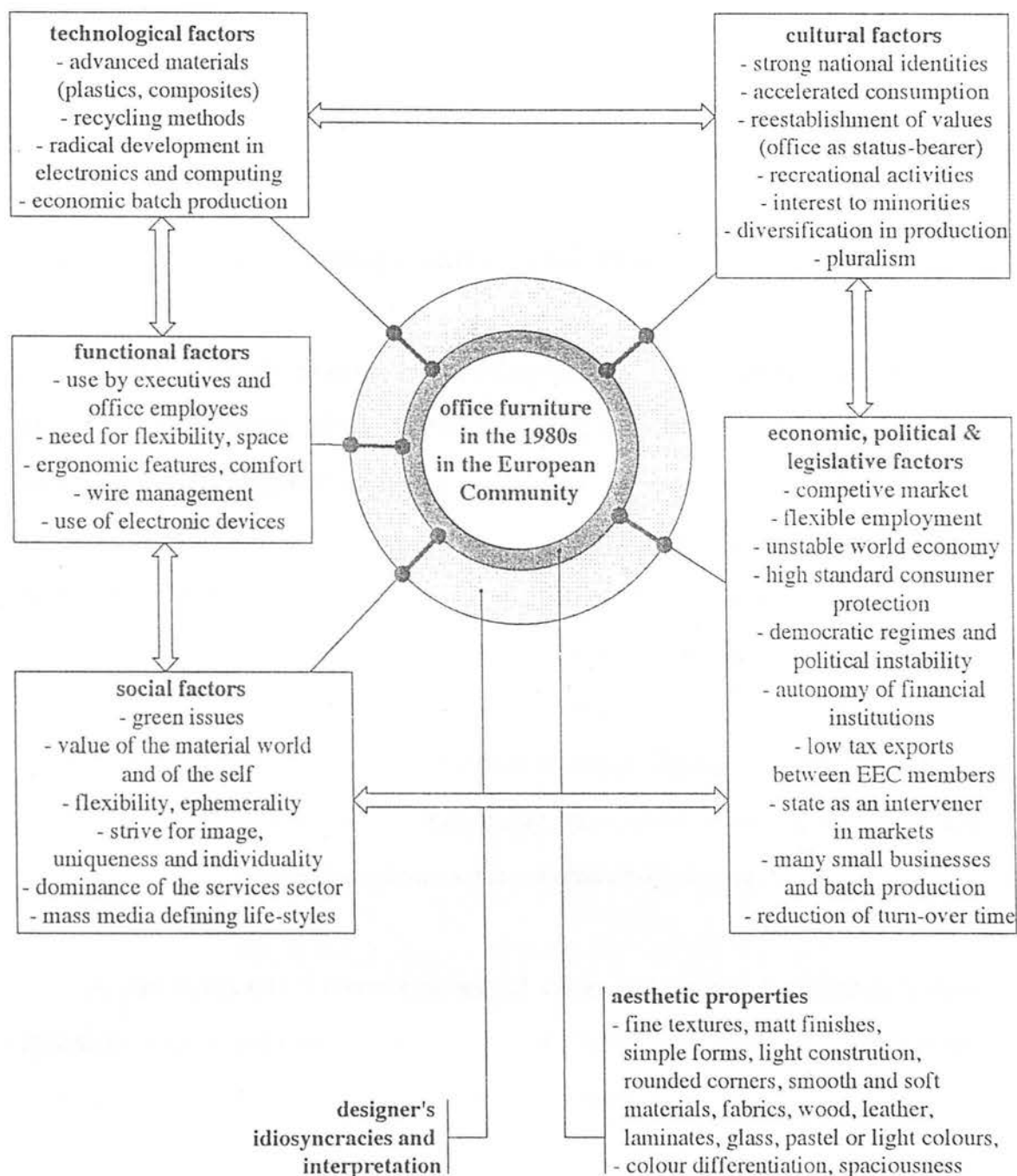
### **5.1.4. Cultural Factors.**

Uncertainty was followed by ephemerality in every aspect of social and cultural life. The office and the status of the services sector offered alternative values to replace the loss of confidence to past ones. Self-identity and image became significant characteristics. Material substances and recreational activities determined the life-styles of people. Searching for identity gave rise to target national identities or minorities, and diversification in production as well as pluralism in ideas and design concepts. As a result styling rather than design became the main means to signify uniqueness.

#### **5.1.5. Economic, Political, and Legislative Factors.**

Economic, political, and legislative factors concern the whole background of western economy as well as the partial legislative and political characteristics of each country. Unstable national economies and political authorities within democratic systems, facilitated the autonomy of financial institutions. General instability, inflation and unemployment gave rise to new modes of consumption and patterns of employment. Flexibility was their most significant characteristic. Part-time or temporary work arrangements characterised not only industrial work, but especially the services, that witnessed an unprecedented increase in terms of employment. Flexibility within the system of financial organisations was regarded as essential in order to cope with unexpected shifts in society and economy. Supported by technology many small scale businesses in the field of office furniture production, replaced the large scale mass production industries of the previous decades and established a batch production model. The formation of a big number of businesses, in parallel with the economic instability, made competition stronger. Innovation and reduction of the life time of products were some of the ways adopted by producers to fight competition. Consumer protection organisations for safety and health were established to monitor the increased number of new products. Tariff reductions within the EC increased competition. Because of international competition support of production from the state was unavoidable.





**Table. 3** Description model of the factors influencing the form of contemporary office in the European Community in the 1980s.

The above model applied to the findings concerning the characteristics of the office in contemporary Germany, Greece, Italy, Spain, and the United Kingdom reveals the office in the 1980s to be a unique formation, created by the interaction between design and its particular context.

## **5.2. Contemporary European Office in the 1980s.**

Economic instability in the 1980s, being characterised by inflation, unemployment and high cost of energy, affected both production and financial institutions within the structure of the European Community. All the states of the Community in order to find solution to economic problems intervened in the market system and made national economy a significant factor in production. From the five countries of the sample, the manufacturing industries in Germany and Italy appear to export their office furniture more than the others, depending so on the economic situation of other countries and being consequently more vulnerable to international economy problems. Moreover, Spain and Greece having recently witnessed a dictatorship and a period of adjustment to democratic regimes, show an obvious dependence upon governmental policies.

A turn to the self, a reestablishment of values and a strive for identity became a means to defend uncertainty in economic and political life, and loss of confidence in science and technology, resulting from environmental damage. The significance of services in the economy of the western world and particularly in the European Community made the office a place that provided status to the individual within it. Additionally, an increase of the values of the material world and of the image of the individual within it created the need for a reassessment and improvement of the office interior and whatever it contained within it. The study findings showed the positive attitude of office users towards their well being and the effects of the office environments on this. People draw attention to their physical welfare, expressing their energy to healthy



eating and physical exercise, which became popular aspects of life-style from the mid 1970s onwards. The designed environment should therefore include elements that signify care for the individual, the well being of the mind and the body.

Comfort, ergonomic features and spaciousness became some of the underlying concepts in the office environment with reference both to physical and mental matters. Fabrics, wood, leather, laminates, rounded corners, smooth, or 'softness signifying' materials, fine textures, matt finishes and simple forms are extensively regarded as signifiers of this attitude. In this way working conditions are improved and bank customers for example are made to feel important. In other words, the individual is placed in the centre of the system. Care for the individual tends to be directed at employees, but in some cultures, e.g. Germany and to a lesser extent Spain and Britain, it is directed primarily at clients to give an impression of better service. In contrast, the same means are used in other cultures, e.g. Italy and Greece to signify consideration for employees rather than as a sign of good service.

Care for the individual is attempted by a friendly and open environment. Signs of friendliness associated with signs of openness and the avoidance of signs of austerity and authority shows the willingness of financial organisations to approach customers in a direct and friendly way in order to secure capital within conditions of economic difficulty, instability and high competition from other financial organisations. According to the study findings, materials such as wood, glass, leather and fabrics, pastel or light shading, fine textures and matt finishes are often intentionally used to reflect friendliness and openness (intentional indicators): wood denotes attachment to the tradition and friendliness towards the environment; glass because of its transparency is not regarded as a barrier between people; leather, fabrics, and fine textures because of their naturality and softness are pleasant in touch; matt finishes have the same effect in the visual sense; pastel and light shading are not intense and thus become indicators of a friendly and tranquil environment. Open space arrangements, service desks without glass protection, fine textures, matt surfaces, readable signage, comfortable armchairs in waiting areas, and writing desks for

the customers characterize most of the banking interiors: equipment for the customers, comfortable armchairs in waiting areas, readable signage and the absence of protective glass in service desks signify friendliness, comfort and care for the individual client; open space arrangement signifies openness between the employees, and between employees and customers; fine textures, rounded shapes and matt surfaces aim to satisfy tactile senses creating a pleasant feeling and thus, signify friendliness and individuality; simple forms and light construction, as well as the use of a variety of materials have a functional purpose and imply rationality and flexibility.

Comfort of the body and satisfaction are important to the individual in contemporary society. People strive for an identity and therefore uniqueness and individuality became desirable characteristics of people and places. People also possess products as symbols of a desired life style. In the working environment status and its symbols express the desire for uniqueness and individuality. Spaciousness, space flexibility, comfort and furnishings seem to be essential, but the extent to which they are manipulated is used to delineate status. The features that particularly delineate status within the working environment are spaciousness, privacy, luxury, the use of personal objects, and the style and quality of furnishings.

The most common indicator of individuality in products is colour differentiation, that does not exclude uniformity. [fig. 62] It is an economic compromise between one-off items and mass produced objects. Usually, specific parts of the structure of an object are produced in various colours so that the same product can look different without being so. The attitude favouring 'image' is thus satisfied by minor and not radical variations. Colour, or detail differentiation and decorative variants on a few basic elements provide the desirable minor differences in the appearance of items that serve the same function. There is an economic reason behind this attitude. On the one hand the majority of the production units are small scale businesses that can not afford the fundamental variations that could be achieved by batch or craft production, and on the other the majority of office



furniture buyers cannot afford the cost of one-offs or craft production with the exception of executive furniture. Another relatively new aspect is 'designing by gender'. Products with male characteristics (straight lines, dark colours, 'strong' forms) or female ones (rounded shapes, curved forms, pastel shades) also project individuality.



**Fig. 62.** The most common indicator of differentiation is colour differentiation, that at the same time does not exclude uniformity.

Economic instability leads to intense competition between office furniture manufacturers that try hard to maintain their existing market share and secure a place in future markets among foreign competitors, especially after the economic unification of the European Community. Therefore manufacturers look closely at the production of their foreign competitors and consequently, they are affected by it. This, together with the homogeneity of the demands of the targeted group, that is the business people, give a very similar appearance to contemporary office furniture products of different origins. The formal characteristics of a working environment are affected more by functional, socioeconomic and technological factors, which are the same in western societies, than by cultural ones. Status differentiation within the office is signified to a much greater extent than national or cultural characteristics. For example, office furniture for executives, produced by different European companies, has more in common to each other than to other products of the same company.

Image plays a significant role in the managerial level and therefore, product differentiation is more common in executive furniture. Most of the companies can afford, or they must show that they can, the cost of one or a few offices furnished in order to look different and more expensive. This creates and sustains the image of the user and consequently the image of the company he represents. Dark colours such as black, grey and brown, chairs with high back and massive volume, are the most common, intentional indicators of status. Together with such materials as wood, leather and lacquers, they define the vocabulary of the manager's office. [fig. 63]





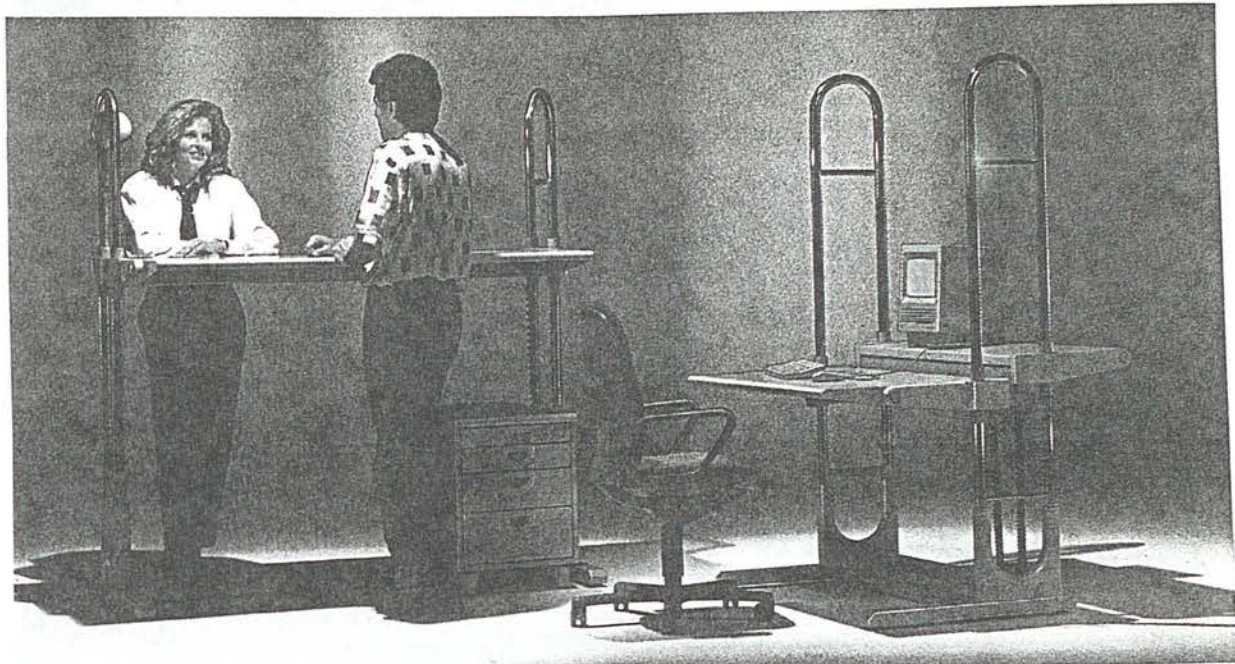
**Fig. 63.** Dark colours such as black, grey and brown, chairs with high back and massive volume, are the most common, intentional indicators of status. Together with such materials as wood, leather and lacquers, they define the vocabulary of the manager's office.

Increased competition affects the design of office furniture in a number of other ways. Office furniture manufacturers, in order to survive, have to be extremely flexible and innovative. They are ready to adjust their products to meet the needs of new target groups and they seek to provide more services to satisfy their clients. Therefore, a wider product range becomes a means of survival, which consequently has as a result the reduction of turn - over time (cf. ch 2.2.8). The reduction of turn over time in production together with some of the social factors characterizing the 1980s in the particular context of the European Community, such as flexible employment, frequent changes in personnel and mobility of working population (cf.ch.2.2.2) affect to a greater extent the office system. Flexibility is, particularly in the 1980s, the key element in attitudes and in the arrangement of places and especially of offices and their equipment. It is signified by metals, laminates, simple forms, light construction, open space arrangements, pastel or light shades and elements of technology such as adjustable heights and positions, cable management, links adjusting to different angles, split-level tables and so on. [fig. 64], [fig. 65]

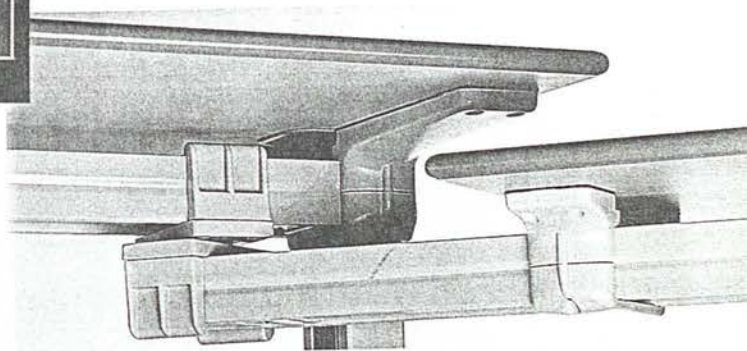
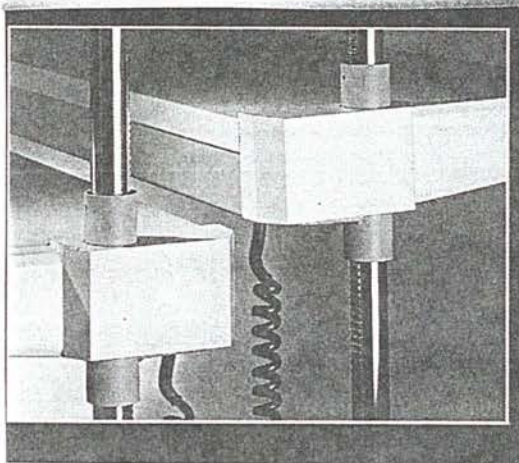
Moreover, flexibility is an important concept to be conveyed by the banking system, as the needs of bank customers tend to change frequently in the contemporary social and economic system. Consequently the design of the working environment is a safe and indirect means of reflecting and demonstrating that the system can be adjusted to new needs.

Innovation, which is a key element in this particular field, seems to be a favourite factor in success. There are two kinds of innovation: technology-push and market-pull innovation. Manufacturers strive to introduce innovative features in their products, even if only minor changes to existing products or restyling exercises. Technological innovation is the most positive factor; it stimulates production and enables manufacturers to redesign their products, which encourages users to update equipment. Radical electronic development affecting information technology supports this tendency.

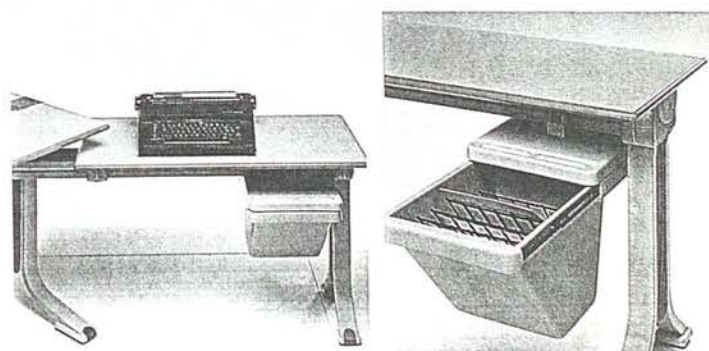




64



65

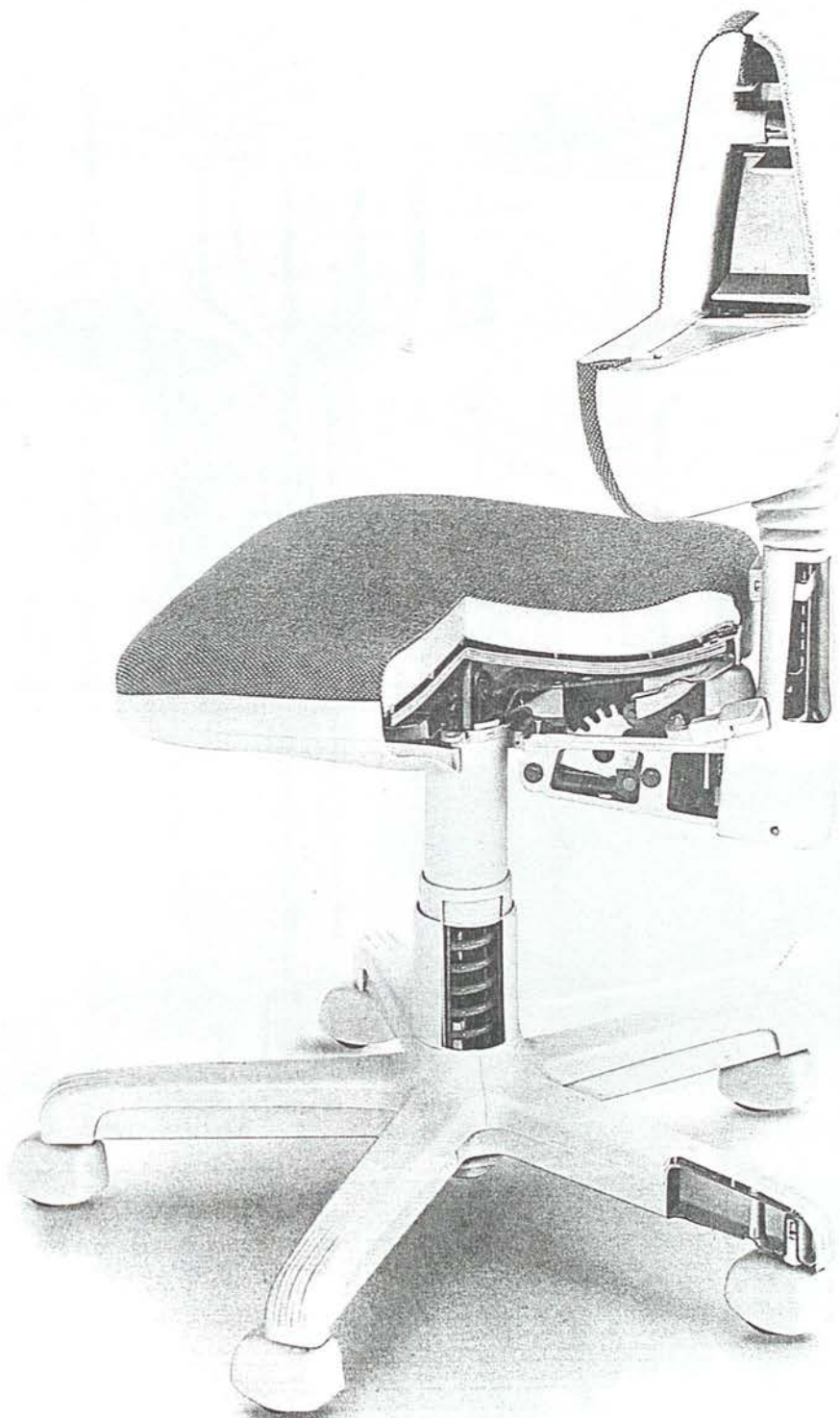


**Fig. 64, 65.** Flexibility is, particularly in the 1980s, the key element in attitudes and in the arrangement of places and especially of offices and their equipment. It is signified among others by elements of technology such as adjustable heights and positions (fig. 64), wire management, links adjusting to different angles, split-level tables and so on (fig. 65).

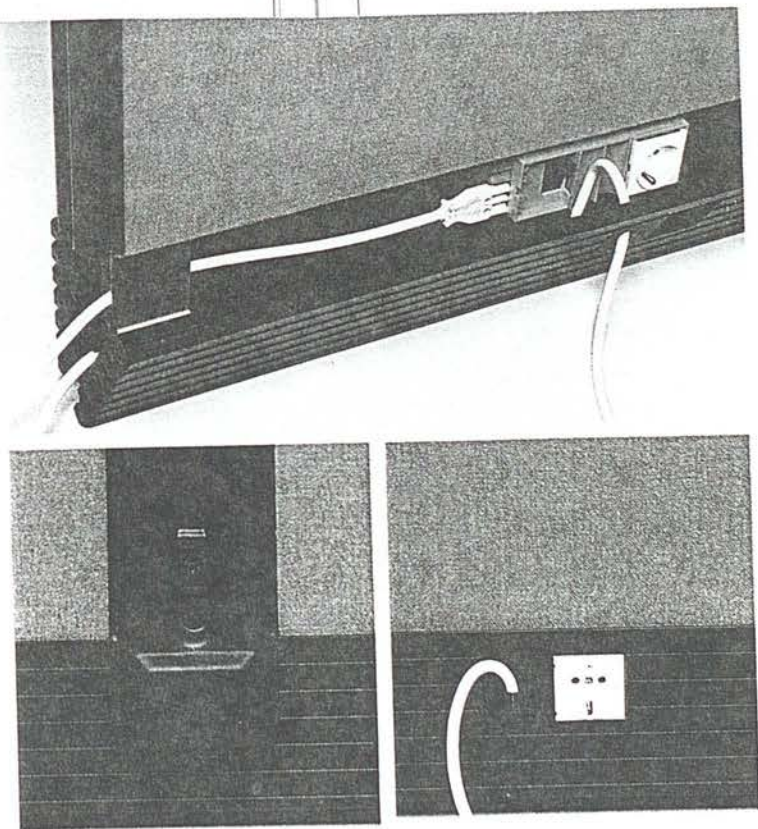
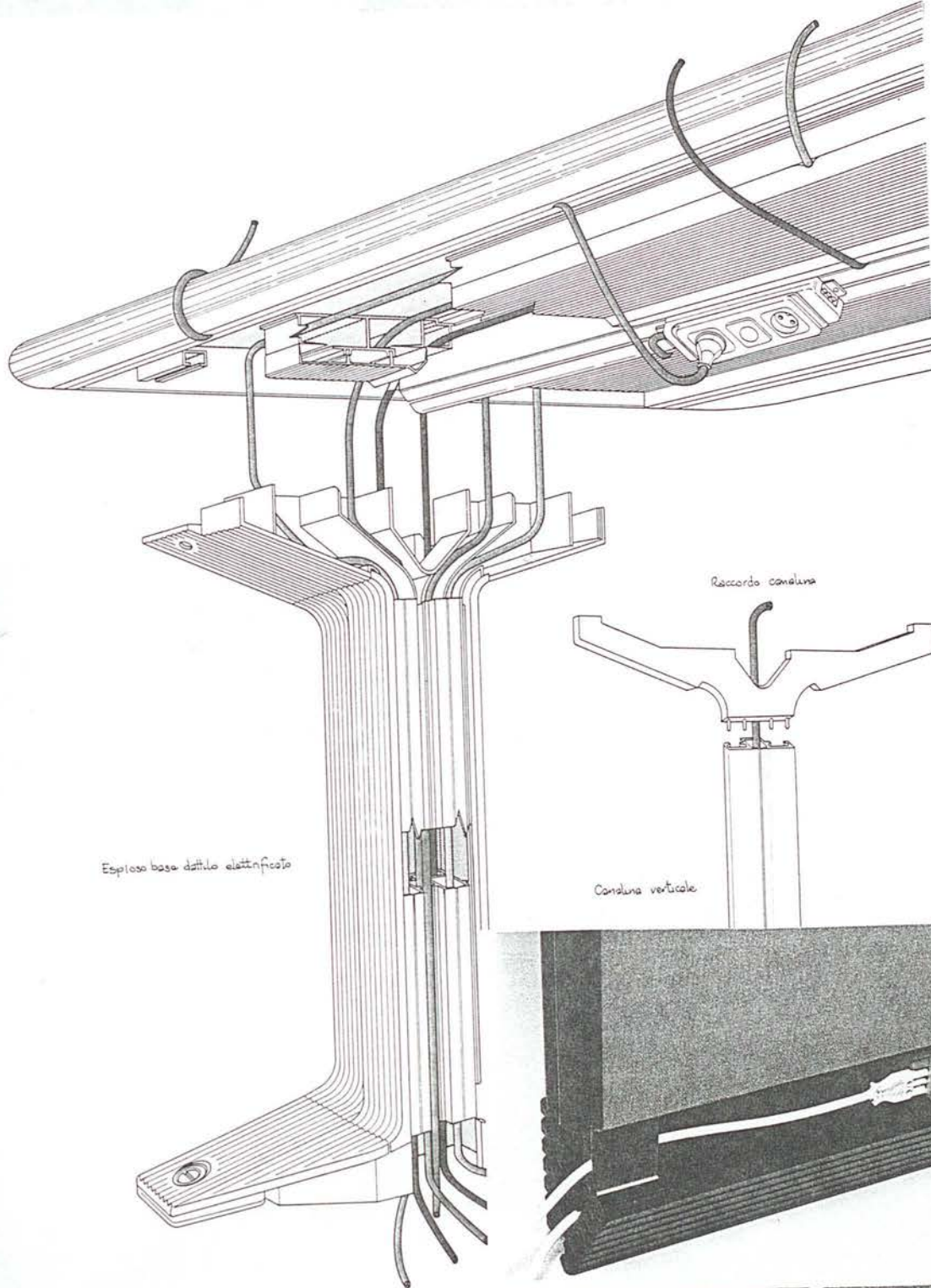
Office automation created a number of new aspects as far as the banking environment and office furniture are concerned. Technological development provided the particular area with mechanisms, that are far more than a simple mechanical device. The user himself can not repair it and the products can not be repaired because of their invisible, hidden infrastructure. A friendly environment, comfort and domesticity presuppose hiding technology. The use of smooth and soft , or finely cut and finished protective coverings provide real and psychological comfort that balance the insecurity and rationality of technology. As a result chairs, desks and panels host in their inner bodies cables and mechanisms that determine to some extent their form. Chairs tend to look fat and desks, being the interface between the operator and information technology, acquire a number of elements, such as plastic pipes, or metal extrusions, to conceal cabling or special sockets, that are integrated in the body of the desk. [fig. 66], [fig. 67]

The introduction of computers to the office created the need for more space per individual employee and determined the development of system furniture, that is the semi-private unit (cf.ch.1.5). This system beyond bridging the division between privacy and accessibility, serves also to a great extent the needs of the new office environment for the storage of files. The use of disk media, instead of paper, for the storage of files has as a result the 'paperless office'. The single desk has been replaced by a combination of versatile work surfaces linked together with the possibility of extension. The placement of technical devices on work surfaces determines the use of durable, maintainable materials, such as laminates. Therefore, functionality, rationality and durability are the main concepts signified by laminates.





**Fig. 66.** Chairs tend to look fat hosting in their inner bodies cables and mechanisms that determine to some extent their form.



**Fig. 67.** Desks, being the interface between the operator and information technology, acquire a number of elements, such as plastic pipes, or metal extrusions, to conceal cabling or special sockets, that are integrated in the body of the desk.



The role of design as a metaphor and as a codified form of non-verbal communication became apparent in the 1980s as both people and organisations depend on image to find and reveal an identity. Bank managers became aware of the social role of design and developed a broad philosophical notion about the banking environment in relation to a design policy. Some points of this design policy would apply to all offices, but banks become a particularly interesting subject being competitive organisations dealing with money, because they constitute the base of the particular socioeconomic system. Through various manipulations of form and space, the banking environment expresses some of the characteristic values of the particular society it serves. Instability and insecurity in contemporary society are causes of irrationality, intensity, extremism and the rejection of the established structures.

Financial organisations try to seem to be above the problems of contemporary society. Banks seek to eliminate manifestations of these tendencies from their premises, in order to make customers feel safe from the outside world and its problems. Traditional buildings are used as a means to signify permanence and stability [fig. 68 a, b]. The concepts of stability and status are regarded to be significant for the rooms of the higher hierarchical levels of the working staff of a financial organisation, the place where decisions are made. The image of the rest of the working areas is attempted to be related mainly with friendliness, comfort and flexibility. Therefore, dark shades, associated with status, luxury and stability, are used mainly in the manager's place. Large scale, massive volumes, wood, leather, shiny finishes and craftsmanship being also signs of the same concepts, characterize the rooms and the equipment of the higher hierarchical levels of a bank. Pastel and light shades, smooth, soft and curved surfaces, wood, glass, and fabrics are extensively used in the rest of the working areas because they are associated with friendliness and comfort. Laminates and light construction are also preferred in the working areas because they signify functionality and flexibility. The use of technology is intentionally projected as it indicates innovation, better service and up-to-date information.

The above issues constitute the main characteristics of office furniture production and office interiors in Banks in the European Community in the 1980s.

Neu am  
alten Platz:  
Dresdner Bank  
in Bamberg,  
Willy-Lessing-  
Straße 20.



Dresdner Bank



**Fig. 68 a.** Traditional buildings, such as this Dresdner Bank branch in Germany, are used as a means to signify permanence and stability.





Fig. 68 b. Traditional buildings, such as this Agricultural Bank of Greece branch in Greece, are used as a means to signify permanence and stability.

### **5.3 Office and Bank Furniture Design in a Cross-Cultural Investigation.**

The content of this section concerns design with particular reference to the theme of cultural diversity. Although most of the conclusive arguments of the study are common for all European offices and European bank furniture, the investigation of the cultural variations in the signification of designed objects is of major importance. According to what is mentioned in sections 5.1 and 5.2 as well as the study findings analysed in the fourth chapter, there are particular features which, although not completely different, show a variety of aesthetic priorities and attitudes that determine the identity of each one of the five countries examined. Office interiors and equipment signify, like any other product, social but also cultural characteristics, which become signs of concepts for the users -clients and employees - in case they possess the cultural competent (code) into which signs are encoded. The synoptic overview that follows attempts an association of the design of banks with the main sociocultural characteristics of each country with the use of five case studies that correspond to the five countries selected.

#### **5.3.1 German Design and the VOKO system for a bank branch.**

The cashier's desk of a bank [fig. 69] developed by the VOKO manufacturing company in Germany is a part of the company's bank furniture aiming<sup>1</sup>, to:

- offer quality in the working environment,
- be flexible, a concept specifically requested by banks. To satisfy this demand, the system consists of horizontal and vertical units that create places for the electronic equipment, for the cashier and for working areas,
- offer the possibility of discrete transaction with the clients,
- be a restrained synthesis





Fig. 69. Cashier's desk of a bank developed by the VOKO manufacturing company in Germany.

This particular cashier's desk embodies, according to the author's opinion, most of the main characteristics of the German attitude towards office and bank furniture and therefore it will be analysed in the present case study.

The object itself as well as the working environment it is placed in, is an attempt to combine functionality, simplicity and comfort, which are very important to German design. The design of German banks is influenced by a general attitude of German society to serve the citizens through an organised system that offers them the possibility to save time and feel respected. This respect for the individual becomes synonymous to friendliness. The bank's customer according to the study findings, as well as to the company's brief is very important in the banking system. The particular system is designed to serve the customers better. The vertical elements aimed to protect discrete transactions achieve it by denoting barriers and connoting a private area and consequently safety and respect. Their tower-like shape connotes protection and hides also the electronic equipment. The 'unfriendly' face of cables and machines is out of sight. Readable signage and the horizontal board in the front of the desk, where the customer can leave his personal things are designed to help him.

The calm horizontal lines and surfaces that run across the desk diminish the tension signified by the vertical elements and creates a balanced and restrained interior according to the demand of the specific client. This particular demand expresses a general German attitude towards non-extreme forms and friendly but plain environments. Austerity is seen as an advantage, at least within the German social system, regarding embellishment as unnecessary. In terms of objects in banks it applies to plain, easily used, maintained and cleaned objects, which because of this become comfortable. The dark and conservative colours, straight lines, undecorated surfaces and the shiny metallic ceiling - signifying austerity because of the coolness of the metal surface as well as because of its shiny finish-, diminish their effect by the use of signifiers of friendliness. So, wood as the main material of the cashier's desk, rounded corners and the use of curtains at the windows



attempt to create a friendly environment. The existence of plants emphasizes in two ways this attempt: on the one hand it acts as signifier of homeliness and on the other the free forms and the warm green colour interrupt and lighten the linear and strictly organised design.

Homeliness is a concept appreciated also by British who also depend on fabrics and carpets in order to signify it. However, one of their major differences from the Germans is the existence of glass protection for the cashier in British banks. The German interpretation of the glass protection is that it diminishes the contact between client and employee and therefore is consciously avoided.

### **5.3.2 Greek Design and the 'Kiranis' office desk.**

Three tendencies are witnessed in contemporary Greek design. The first is followed by designers committed to styling, influenced by the manipulation of form and the work of European, American or even Japanese designers presented in design magazines. The second is created by manufacturers who copy successful designs from the international market. The third concerns those designers trying to creatively innovate, stimulated by the developments in ideas and methods of production of the international design scene, while at the same time they refer to their Greek background.

The office desk designed by the Greek designer Kiranis for the Katoikein company [fig. 70] is representative of the third as it is stated by the designer. Although it avoids to imitate particular European models, it is designed to meet the contemporary needs of an office desk adjusting to the Greek manufacturing abilities. The designer and the representatives of the manufacturing company explain their intentions and approach to design in an interview (2) in which the following are declared.

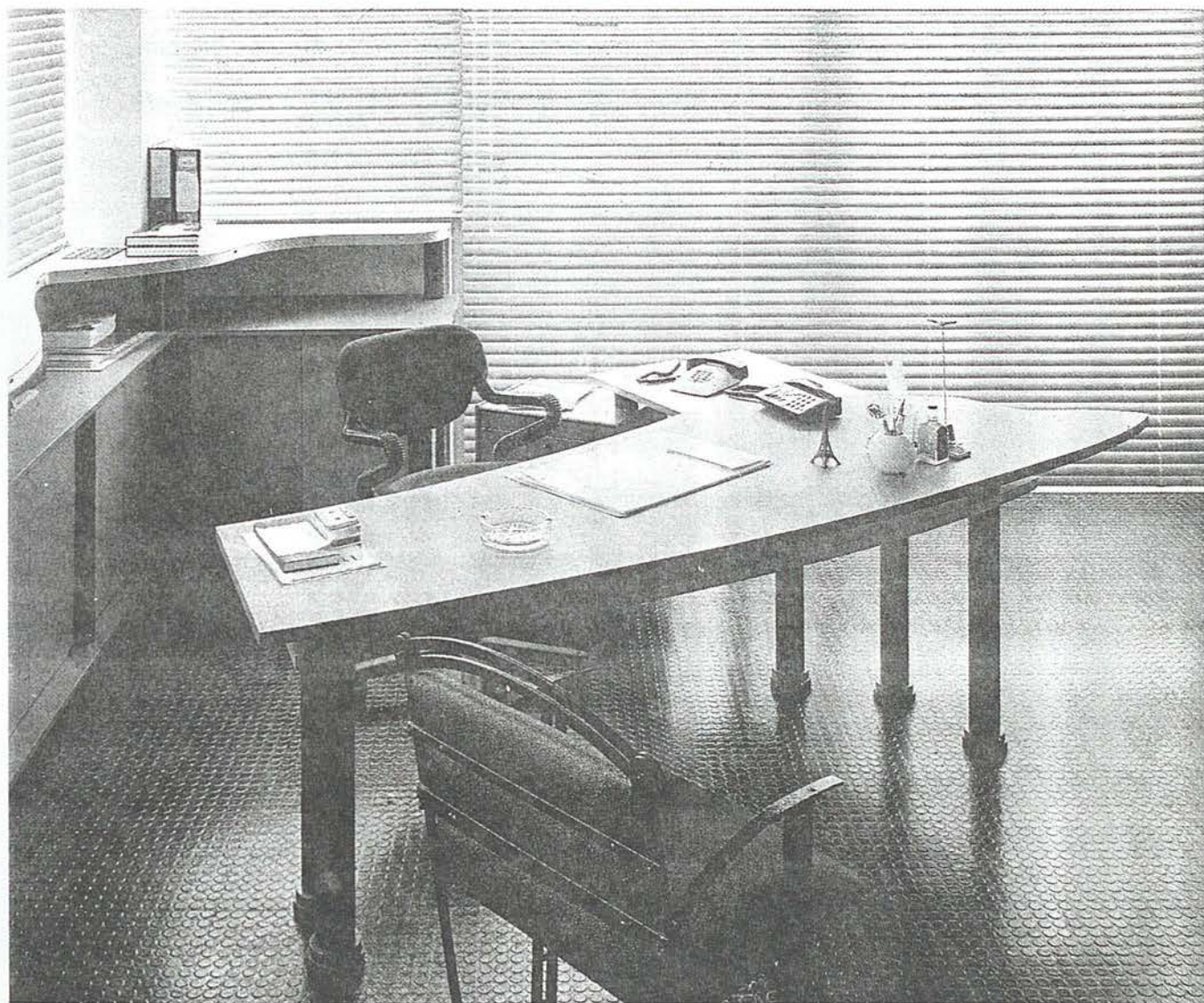


Fig. 70. The office desk designed by the Greek designer Kiranis for the Katoikein company



The aim is to find out and cultivate the particular features that make the 'Greek element' and address them to a global society. In their attempt they started out more for a morphological intention than from a form. Their production refers on the one hand to the Greek tradition in metalwork of the 19th century, when hand made production was not confined by the rules of industry, and on the other in the production of the interwar period and the 'Modern Movement idea'. They see their work as fully adjusted to the spirit of the times and the post-industrial environment. Accepting the fact that Greece is not and could not be industrialized according to the German model, they believe in the production of small series of objects heading for standardization. They express a tendency for the reconsideration of the 'Modern Movement idea', declaring that modern is above all people's belief that they can change their own fates and the world with the help of the machines. They work with systems negating at the same time the concept of a standardized rhythm and a strict grid. Working out sizes and distances, they try to get closer to the golden section rule and the rationale of the proportions and the rhythm that creates forms in a way which is nearer to music.

The above statements and the production of the particular company express a preference for practical solutions and a national 'doric' spirit, characterised by forms of masculine strength, geometrical purity and simplicity, as expressed in the Classical Doric order. This attitude was overshadowed in Greece during the eighties as many contemporary Greek designers were influenced by imported goods and an international tendency towards styling in the design scene.

The desk, as well as the shelf is a synthesis of horizontal surfaces and vertical, column-like supports. There are clearly defined characteristics for each function:

a) The legs of the desk, supporting the working surface are metal tubes. Their material, iron, due to its properties is a signifier of strength and austerity. The last concept is partly diminished by their matt finish, but still emphasized by their dark colour. Their simple stereometric shape, cylinder, which is the development of circle in space, is a powerful

distinctive shape, which, besides this, makes a reference to the form of the classical columns, which were used to support temples. The connotation of this part of the object is a feeling of stability and truthfulness as the properties of the material and its use as support are in complete identification.

b) The horizontal working surfaces are less strict because of their free curves. The working area seen as the signification of the limits of the user, tends to be extended freely towards the client or the colleague seated at the other side of the desk. The light grey colour of the surface, besides functional reasons is another signifier of friendliness and a denial of authority as a signified concept. The last concepts are emphasized by the lack of any vertical surface preventing the view under the working area. The vertical surface is extensively used especially in executive desks in order to secure the desirable distance between user and client. Its existence is a signifier of status and authority.

The whole design is consistent with the 'Modern movement idea' as declared by the manufacturing company for many reasons. First of all the various parts of the synthesis maintain their distinctive characteristics. Each one plays the role it is expected to, being true to its material form and function. Secondly, only the necessary elements appear in the object in order to satisfy the users needs. So, the construction is light with no applied decoration. The decorative elements are those that occur through functional reasons and from the texture of the materials.

The above synthesis due to the simplicity of the materials and the low-tech methods of production has to a certain extent limited cost targeting to groups which, although they are design sensitive, they can't afford imported or expensive products, or they demand items that are easily maintained and cleaned. It combines the simplicity and is consistent to the Modern Movement relationship between what it is and what it seems to be, with the flexibility, the free forms and the multifunctionality of contemporary trends.



### 5.3.3 Italian Design and the Matteograssi office chair.

Italian banks seem to be influenced by a combination of the sensual Italian design and the rules of the free market, especially that of flexibility. The successful industrial and economic background of the country owes a lot to the daring attitude of the Italian people. Italians are loud and expressive and they seem to be able to adjust, change, and risk. This, together with the preference for eccentric forms and design lead to a variety of means and materials in the banking environment that attempt to impress, be flexible and comfortable. The demand for the expression of affluence by the Italian banks is probably used as another means to impress and consequently to succeed.

The following design case study summarizes, according to the author's interpretation, the Italian approach. Matteograssi, an Italian manufacturing company produces a number of series of leather furniture that express, on the one hand a typical Italian love of sophisticated forms, and on the other, the association of leather with such concepts as luxury, status and individuality. Corium 2/1 GR swivel armchair by Tito Agnoli - 1985, [fig. 71] is upholstered with full-grain, aniline-dyed calfskin and supported on a five-spoke base on castors in die-cast aluminium coated with scratch-resistant paint.

According to the company's brochure (3), leather is a noble material that has accompanied man through time with sturdiness and adaptability. With the passing of the years it takes on that slightly artful appearance of a peaceful material that has lived through numerous events. Leather tends to focus on itself: an old leather armchair is loved for its material, its colour and its unchanging touch through the ages. In order to take on this warm appearance, leather must be of the best quality and processed with a wealth of experience. Matteograssi's processing is accompanied by the same methods and the same traditional tools such as the whalebone and the leather skiving knife.

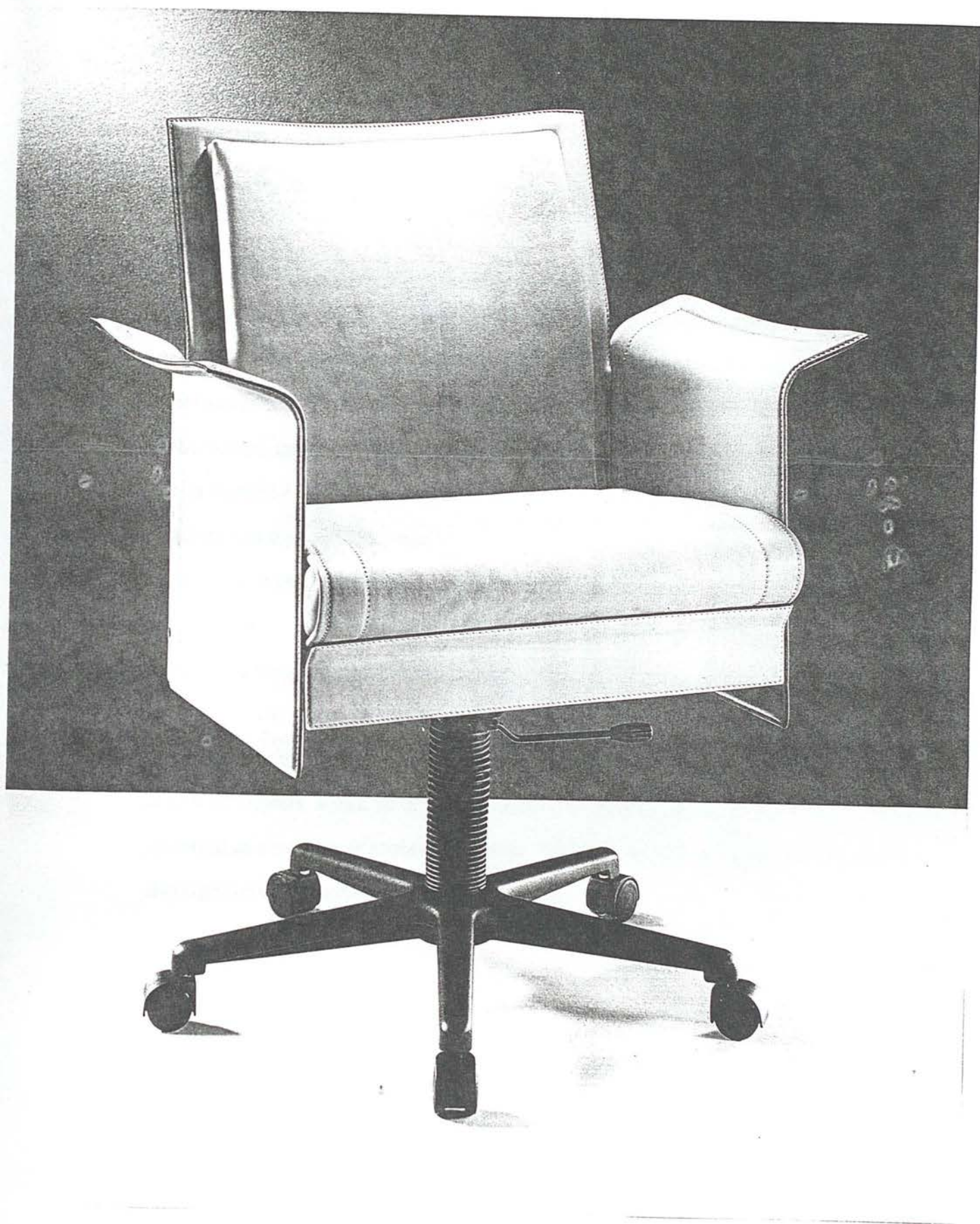


Fig. 71 Corium 2/1 GR swivel armchair by Tito Agnoli - 1985.



The particular processing of the leather body demands craft work, a fact that makes the object expensive and therefore, luxurious and individual, relevant to the executive working environment. The simple geometric shapes of the different parts could be seen as significant forms of austerity and rationality. Rationality and flexibility are mostly appreciated by Italians especially in association with the banking environment.

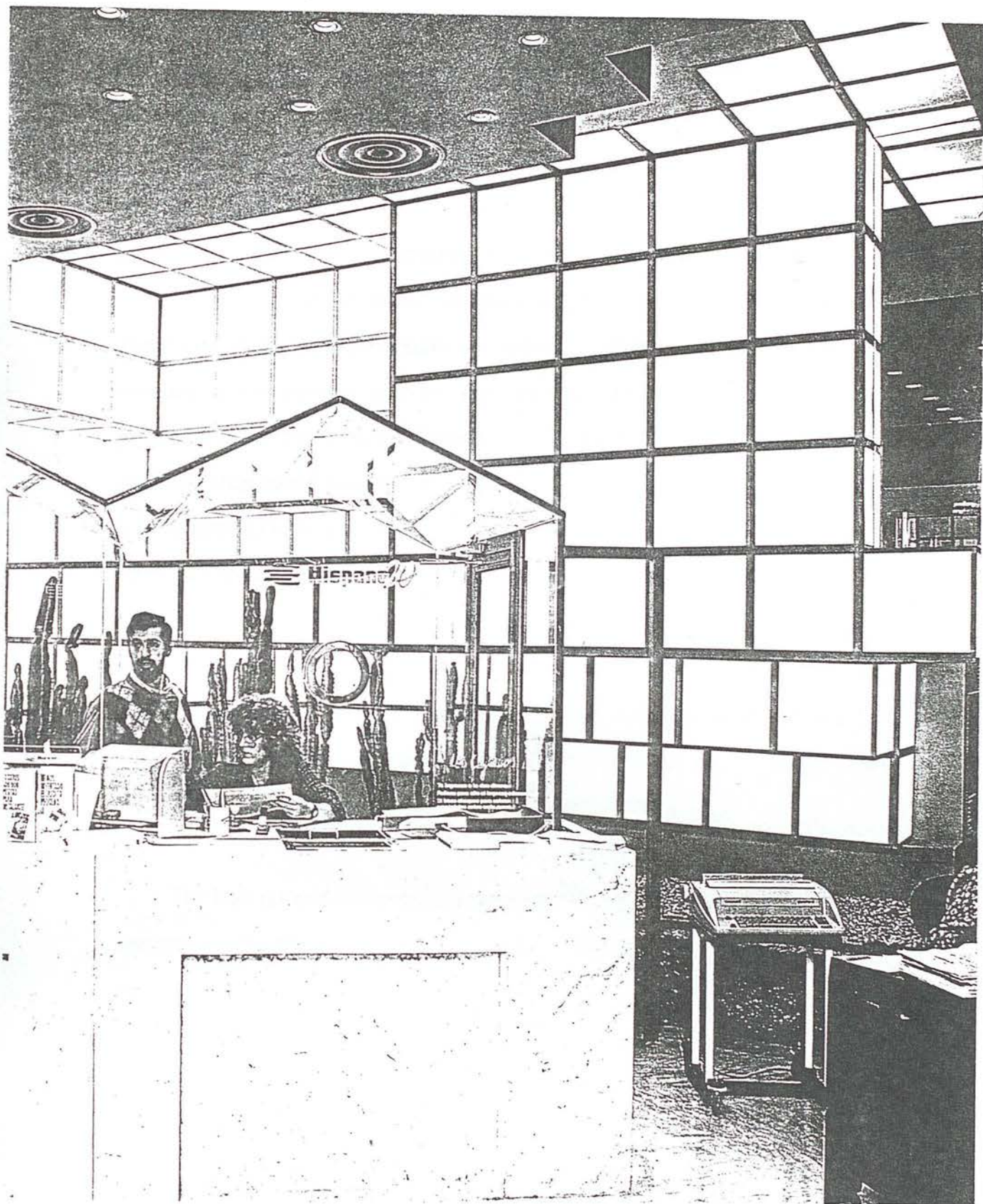
Minimum thickness, which is not a preferable morphological feature of the products of the 1980s which are characterized by 'fatness' and compactness, contribute to the austerity of the form and make the armchair 'light' and elegant. Elegance and the unobtrusive decoration of double stitch around the various surfaces express a sophisticated approach. It emphasizes at the same time the material, its process and the values signified by it, an approach that best expresses the company's aims. Its discreet cushions and the rounded surfaces of the arms are used to diminish austerity and signify comfort and friendliness to some extent. The thin lines and the simple form of the base are used to project the main body. They are designed in such a way to show the same elegance expressed by the form of the main body. As in the main body, the various parts and joints are visually differentiated, avoiding the compact look of the 1980s characterizing most products. This attitude coincides with a traditional approach to the design of objects where each part maintains its identity while at the same time it is perceived as a member of a whole. The matt finish and smooth texture of the base become also signifiers of friendliness.

#### **5.3.4 Spanish Design and the cashier desk of a Hispano Americano Bank branch.**

The fall of the Franco dictatorship in the 1970s was the beginning for the shaping economic background of the country. Most of the financial organisations of Spain try to find the methods to become competitive in terms of better service and image. Therefore, stability and authority are important concepts in the design of banks, co-existing with a cultural attitude towards decorative forms.

The cashier's desk of a Hispano Americano bank branch [fig. 72] designed by the architect José Angel Rodrigo is presented in this case study as a representative example of the Spanish attitude towards office and bank furniture. White marble and antibandalic crystal 26 mm thick are the materials used by the architect/designer. The architect himself describes this specific object as the nucleus of the bank, the temple, the tabernacle, the house, that signifies a special attitude being dynamically differentiated with marble lining and being placed in front of a lighted background that springs up dividing the object's own volume (4).





**Fig. 72** The cashier's desk of a Hispano Americano bank branch designed by the architect José Angel Rodrigo is presented in this case study as representative example of the Spanish attitude towards office and bank furniture.



Spain has, according to the study findings, a particular relation to glass that can be investigated in the specific cashier's desk. It is designed with protective glass around it and a glass roof over it, with reference to the image of the 'house'. The image of the house signifies security and protection that are important meanings for a bank environment. The formal association with the roof of classical temples signifies also authority and status. Post modernistic metaphors, as the above, are part of a general experimenting tendency of Spanish design in the 1980s. The clear stereometric shape, the undecorated surface and the straight lines express a rational approach. The hardness and coldness of the material together with the shiny finish create a real, as well as a psychological need to keep at a distance from the object. Its closed shape defines the 'in' and 'out'. Thus friendliness, which is not requested in the banking environment in Spain, is not attempted to be signified by this particular object in spite of the familiarity of the form. The solid shape of the base can be interpreted as signifier of stability, the white colour, the shiny finish and the hard material can be interpreted as signifiers of rationality and austerity. The contrast of the visually heavy marble base and the dynamic background of the illuminated grid make the glass structure look almost invisible and the transparency of the upper part balances the solid shape. The definite, although transparent symbolic form of the barrier reflects the need for privacy and protection.

The high price of this reinforced glass together with the demand for protection and security could be taken as indicators of affluence, especially within this carefully designed environment. According to the study findings concerning the Spanish subjects, glass is the main signifier of affluence and the particular concept is highly appreciated in Spain in relation to banks. The existence of other glass structures, such as the glass illuminated wall in the background, reveals a general preference for this particular material. Italian and Greek subjects agree that affluence should be expressed by a bank, but they don't regard glass as a means in order to achieve it. The German, British, Italian and Greek respondents regard glass as an important expressive means of rationality, a view deriving probably from the physical form of glass as well as from its significant forms:



transparency, ability to give clear cut shapes and ability to provide various effects in terms of strength and transparency mainly due to sophisticated technological processes. Their view is different from that of Spanish respondents, who seem to appreciate the properties of the particular material, and although they favour also the concept of rationality in association with the banking environment, they disregard the signification of the particular concept by glass.

#### **5.3.5 UK's design and the Antocks Lairn's 'Executive' chair.**

The design of British banks reflects some national characteristics. Interiors reminding home and lacking extreme express friendliness and do not attempt to impress but to become familiar. Friendliness, openness, but also authority seem to be significant characteristics of the identity of a bank.

One specific example characteristic of the British attitude is Antocks Lairn's 'Executive' chair of the 'Articula' range [fig. 73]. It includes most of the British characteristics in product design. As declared by the company in their brochure (5), the design of the chair attempts to incorporate a combination of mechanical linkage, body responsive spring pressure and gas operated link adjustment. The concepts emphasized in the brochure are on the one hand the comfort of the object due its articulating parts and on the other the ease of maintainance, adjustment and fixing, as well as the wide choice of colours and textures in order to be in harmony with any contract setting.

Its main body is upholstered with fabric. The use of fabrics suggests a home-like interior that leads to a second-level connotation of friendliness. Homelikeness, rounded corners and smooth texture signify comfort, a meaning associated with fabrics by British respondents. The partly padded arm-rests are used to make the chair more comfortable, but they also reveal a tendency to design a product by putting a number of features together to satisfy various demands, dealing with them as units and not as a one form. The majority of the British design production is an outcome of this attempt to satisfy most

of the ergonomic, practical, aesthetic and cost demands making a compromise as far as the form is concerned. On the contrary, the Matteograssi chair discussed previously as a representative example of the Italian design, is a product designed to satisfy a form 'ideal'. The volumes and the shapes is attempted to be in harmony with one another and the connection of the various materials is characterized by an aesthetic rather than a functional approach. For example, in the Italian product the relation between the texture of the materials was studied as a whole to be pleasant in visual and tactile terms, while in the British product the fine texture of the fabric and the chrome plated base are chosen to satisfy their particular function rather than the aesthetic outcome of the synthesis. Moreover, the lack of thickness and softness of the Italian chair aim to improve the aesthetic part of the design, although they diminish comfort to some extent.

One of the main characteristics of the object's form is its high back. It makes the object look bigger and noticeable and therefore, important and powerful. Consequently, it does so to its owner. The straight horizontal line of the upper part of the back adds to this dynamic metaphor. This signification of status and authority is consciously diminished by the object's other features such as the conservative decoration of light stripes, round corners and soft material of the main body.





Fig. 73 Antocks Lairn's 'Executive' chair of the Artacula range.

### **5.3.6 General comments on cultural diversity in the European office design.**

The previous examples express characteristic attitudes and preferences of the five countries selected, as far as morphological manipulation, form and signification of concepts are concerned. Conclusive statements for the European office furniture production were discussed in sections 5.1 and 5.2, the importance of which is not diminished by the fact that particular preferences and ways of expression, as well a different notion of taste -as discussed in section 1.2 -characterize the production of each particular country.

Although the five examples investigated in this section could not be adequate to draw conclusions and make comparisons, the author chose them as representative of the national tendencies of the country each one represents. The interpretation of the author was based on primary and secondary sources, and the investigation in sections 2.4 and 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.3.5. The investigation of five examples can only support suggestions about cultural diversity. Further research would be necessary to substantiate these findings, which is beyond the limits of this study and could be the subject of another piece of theoretical work.

According to the author's interpretation a combination of factors aiming to make an object functional is the most important task in Britain and Germany. The other three countries, Greece, Italy and Spain seem to regard other priorities equally important besides making an object functional. The most important of these priorities is the expression of an idea, an abstract element that characterizes the substance of the examined objects. More over, the idea behind the Greek designer's desk was to project the characteristics of the 'Modern Movement ideal', that is clarity of form, simplicity and respect for the machine production. In the Italian case the main intention is the signification of such concepts as elegance, affluence, status and timelessness. Therefore,



the form and the materials used contribute mainly to the satisfaction of this idea. The Spanish example was projecting the idea that the cashier's desk is the nucleus of the bank. In this case too, the materials used and the form of the object is perceived more in a symbolic than a functional way although that functionality is not denied.

As a result of the above, it could be said that in most Greek, Italian and Spanish design the theoretical basis plays an important role in the process of creating a form. The communicative and significative properties of an object and the connotative level are important elements of the design process.

In the cases of Germany and UK the dominating idea is the fulfillment of as many as possible demands concerning practical matters and the combination of features in order to achieve a functional, comfortable, easily maintained and used object. This intention is expressed in the form of objects. For example, the shapes of the objects examined result from the particular function: the vertical elements of the VOKO desk take the size and the shape of the terminal units they include and all the features of the Antocks Lairn chair result from ergonomic parameters and not for the sake of styling. An intention for styling is obvious in the rest of the examined objects: the curves of the working surface in the Greek design, the metaphoric approach of the Spanish one, and the choice of the elements of form in order to satisfy a conceptual approach in the Italian design, express a completely different attitude.

Finishes of the form, such as the tendency to 'soften' the edges and round the corners of the objects together with the use of the specific materials are characteristic of the German and British design and representative of a more general national tendency. The materials used in all the examples are characteristic of the attitude of each country, if examined as signifiers of the particular concept of friendliness. Fabrics and wood are the most important signifiers of friendliness and this coincides with their use in the British and German design, countries where friendliness is much appreciated in the working environment. In Spain where friendliness is not so important as other concepts in relation

to the working environment, materials such as glass and marble are used which are not usually related to friendliness.

Cost as a general issue seems to be approached in slightly different ways by the countries of the sample, although the target group is the main means for the manufacturer to determine price. As it was mentioned in a previous chapter the economic background of a target group has a more significant role than the group's nationality as far as the office furniture production is concerned. According to the study findings German and Italian subjects do not seem to place price among the first priorities, either because there is a broad target group for a more expensive solution, or because image, resulting from expensive and therefore status-signifying materials, is of major importance. Affluence is one of the significations of leather and wood. On the other hand the 'good value for money' principle of the British market diminishes the limits for unnecessary expenses for materials, or manipulations of form, that do not improve at the same time a functional and practical matter. More over, lower cost is not regarded as one of the most determining factors for product preference in Britain, but at the same time the signification of affluence does not seem to be very important for the British. In the particular example of British design examined in this section, attention is paid in the articulation of the seat, but the form and the materials do not attempt to offer any kind of innovation, or be seen as important signifiers of concepts such as affluence or authority.

To disregard the signs of affluence is based mainly on ideological reasons in the British society. In Greece and Spain, because of their problematic economy, low cost is a practical barrier determining most of the times the consumption of manufactured objects. The 'international style', that is the stimulating theory behind the Greek item examined, defines some rules among which is the rejection of expensive materials and affluence-signifying ones. It has to be mentioned here that this is not always the case in Greek and Spanish design. Status signifying materials such as leather or marble are also used when the economics of the buyer permit. But, most often the 'good value for money' principle



is a necessity for many offices and the decision affects mainly the materials and/or the quality of construction.

The manufacturer of the specific Greek desk consciously uses materials such as laminates that are quite cheap, compared with other materials, to diminish the cost. This decision is a practical one. He also consciously denies the use of laminates imitating other more valuable materials in order to express consistency between concepts and means. The use of expensive materials in the Spanish case, such as marble and antibandalic glass is an attempt to signify affluence which is a very important concept to be signified by Spanish banks in contrast to the German and the British ones. Glass and marble are signifiers of rationality, a concept appreciated to a great extent in Spain in relation to the working environment.

This exploratory study may be likened to the mapping of virgin territory at the stage where the outlines are being plotted. The general features have been delineated through the construction of the model, the development of the methodology, and their application to banks and office furniture. It is the basis from which further research - producing the contours and other details of the topography - may proceed.

## REFERENCES

- (1) *VOKO Das Büro. Das komplette Programm für den Büroarbeitsplatz der Zukunft*. Catalogue of the company's products, 1990.
- (2) *TEYXOS*, "Systems versus scenography". A conversation occasioned by the 10th anniversary of "Katoikein", (Athens December 1990), no. 4, pp. 101-110.
- (3) "Matteograssi", catalogue of the company's products, 1990.
- (4) J. C. Terroba, *Oficina de Madrid*, "Perdiento la compostura", no 13, 1991 pp. 19-33.
- (5) "Antocks Lairn": *Articula*, catalogue of the company's products, 1990.



## EPILOGUE

The thesis attempted to investigate the relationship between the designed object and sociocultural factors. The investigation concentrated on bank interiors and office furniture in contemporary Europe. Reference to a specific subject was regarded as necessary in order to deal with concrete facts and present better the arguments of the theoretical background.

The thesis started by examining the social origin of design. **Chapter one** argued that the development of, and the influence on, design activities both reflect and determine changes within a culture. Design forms are related to the aesthetic response of the users, i.e. their taste. Taste was argued to be an attitude created through socioeconomic and cultural factors. Placed in a social background, taste acts as a form of communication through stylistic choices. The argument of the social origin of design was augmented by the introduction of a description model that concerns manufactured objects.

**Chapter two** examined the sociocultural tendencies in the specific context of contemporary Europe. The outcome of this investigation was used at a later stage within the thesis to support the argument that the form of contemporary European office furniture and bank interiors has been influenced by its context, and to interpret manipulations of form. The framework of the last decades is characterized by a shift towards employment in services, emergence of information technology, economic uncertainty, and a move to aesthetic matters, ephemeral products and flexibility in production techniques and consumption modes. Particular reference was made to a sample of five representative European countries - Germany, Greece, Italy, Spain and U.K-, their social characteristics and their design production in the 1980s.

The argument that values and concepts of a society are reflected in the form of its

products was a major theme within the study. **Chapter three** attempted to provide the methods of approach and analysis of the means by which objects become communicative devices conveying meaning. Reference to communication theories, semiotics and product semantics supported the method of investigation. Design was examined as a system of signification and a form of 'language'.

**Chapter four** dealt with the analysis of two questionnaires addressed to office furniture manufacturers and banks from the sample of the five countries mentioned above, in order to provide evidence. The form of office furniture and bank interiors, the meanings associated with them and the sociocultural and economic tendencies of contemporary Europe were the subjects of the questionnaires. The formulation of the questions, as well as their analysis was based to a great extent on the methodology presented in the third chapter. The author attempted here a relation between the study findings and the discussions in chapters one, two and three. A significant subject was the association of material substances of office equipment, such as the material an object is made of, its colour, texture, construction and shape, with concepts and meanings.

Finally, **Chapter five** was an overview of the study. The design of the contemporary office environment was seen as a focus for the aspects of our sociocultural system and as a signification system between people and infrastructure. The general description model which was introduced in chapter one was presented here complemented with all the evidence obtained through the study concerning specifically office furniture products in the European Economic Community in the 1980s. The role of design as a metaphor and as a codified form of non-verbal communication became apparent in the 1980s. It was argued that in contemporary Europe office furniture and interiors are used as visual metaphors and therefore the role of designer as stylist is important.

Products became portable and light, but powerful, flexible, with a number of tasks to perform, user friendly, and with characteristics that give an impulse to subjective interpretations. The significance of services in the economy of the western world and



particularly in the EC made the office a place that provided status to the individual within it. In the contemporary office environment concepts such as comfort, ergonomic features, spaciousness and friendliness signify care for the individual and the well being of the mind and the body. Additionally, individuality became a characteristic of the office as a result of a desire for uniqueness and identity. The introduction of computers and technology in the office resulted in the replacement of the single desk by a combination of versatile work surfaces linked together with the possibility of extension.

The study findings suggested that the above characteristics and the dominating tendencies do not differ a lot from country to country. However, a further investigation of cultural diversity seems necessary to confirm even more the argument that the values of a society and meanings are reflected through the form of objects and that within contemporary mass culture features of differentiation are apparent.

The content of this study may provide a model of approach to designers and decision makers who aim consciously to manipulate design.

## BIBLIOGRAPHY

### DESIGN AND EUROPEAN SOCIETY/ CULTURE

#### BOOKS

- Barnes, Anthony, *Europe, people and society*, (London, Harrap, 1980).
- Bayley, Stephen (ed.), *Taste*, (London, Conran Foundation, 1983).
- Bayley, Stephen, *Commerce and culture: from pre-industrial to post-industrial value*, (London, The Design Museum/Fourth estate, 1989).
- Beardsley, Monroe, *Aesthetics from classical Greece to the present, a short history*, (New York, The Macmillan Co., 1966).
- Bell, Daniel, *The Coming of Post-industrial Society*, 1973.
- Bourdieu, Pierre, *Distinction, A Social Critique of the Judgement of Taste*, (London: Routledge and Kegan Paul, 1985).
- Burgin, Victor, *The end of Art theory: criticism and post-modernity*, (Houndmills, Basingstoke Hampshire London, MacMillan Education Ltd., 1986).
- Campbell, Collin, *The romantic ethic and the spirit of modern consumerism*, ( Oxford, Basil Blackwell, 1987).
- Connor, Stephen, *Post-modernist culture*, (Oxford, Basil, Blackwell, 1990).
- Conran Foundation (ed.), *National characteristics in Design*, (London, 1985).
- Depaigne, Jacques, *Cultural policies in Europe*, Strasburg, (Council of Europe, 1978).
- Douglas, Mary & Isherwood, Baron, *The world of goods, towards an anthropology of consumption*, (Penguin Education, 1980, Other ed.:USA, Basic Books Inc. 1978 & London, Allen Cane 1979).
- Eisenstadt, S. N. & Shmuel N., *European civilisation in a comparative perspective, a study in the relations between culture and social structure*, (Oslo, Norwegian University Press; Oxford, Oxford University Press, distributor, c. 1987).
- Foster, Hal (ed.), *The Anti-aesthetic, Essays on Post-modern Culture*, (Port Townsend, Bay Press, 1983).
- Greenhalgh, Michael & Megaw(ed.), *Art in society, studies in style, culture and aesthetics*, (Vincent, London, Duckworth, 1978).
- Harding, Stephen D., *Contrasting values in W. Europe, unity, diversity and change*, (Basingstoke MacMillan in association with the European Value Systems Study Group, 1986).
- Harvey, David, *The condition of post-modernity: an enquiry into the origins of cultural change*, (Oxford, Basil Blackwell, 1990) .



- Hoffmann, Stanley & Kitromilides, Paschalis (ed), *Culture and society in contemporary Europe*, (London, Allen & Unwin, 1981).
- Katz, Elihu & Szecsko, Tamas, *Mass media and social change*, (ed. by International Sociological Association, London, Sage, 1981).
- King, Stephen William, *Communication and social influence*, (Reading (Mass.), Addison-Wesley, 1975).
- Lane, Jan-Erik & Errson, Svante O., *Politics and society in Western Europe*, (London, Sage, 1986).
- Laszlo, Ervin, *European culture and the world development*, (ed. by Unesco joint studies for the European cultural forum, Oxford, Pergamon, 1985).
- Lee, Roger & Ogden, P. E., *Economy and society in the EEC, spatial perspectives*, (Farnborough, Hants, Saxon House, 1976).
- Lehmann, Arthur George, *The European heritage, an outline of western culture*, (Oxford, Phaidon, 1984).
- Miller, Daniel, *Material culture and mass consumption*, (Oxford, Basil Blackwell, 1987).
- Ohio State Un. Press (ed.), *The postmodern turn: essays in postmodern theory and culture*, (Columbus, 1987).
- Smith, Alfred G., *Communication and Culture*, (New York - London: Holt Rinehart and Winston, 1966).
- Sudjic, Deyan, *Cult objects; the complete guide to having it all*, (London, Paladin, 1985).
- Whyte-Law, Lancelot (ed), *Aspects of Form, A symposium on Form in Nature and Art*, (London, Lund Humphries, 1968).

#### ARTICLES

- Aldersey-Williams, Hugh, Knowing your culture through its design, in *Blueprint*, no 63, (Dec. 1989-Jan. 1990), p. 12.
- Bannard, Walter Darby, On taste, in *Art's Magazine*, LVIII/8, (Apr. 1984), p. 128.
- Blackwell, Lewis, A tale of too much, in *Creative Review*, vol. 9, no. 11, (Nov. 1989), pp. 69, 71.
- Bonsiepe, Gui, Bad taste, good taste, distaste, in *Ulm Journal*, (May 1964), pp. 57-58.
- Bourne, Richard, Nine varieties of European, in *New Society*, (7 June 1979), pp. 570-1.
- Callaghan, James, Is there a European identity?, in *Australian outlook*, 35, (Apr. 1981), pp. 11-18.
- Cohen, Beverley, Products: look at Eurostyle, in *Design Week*, (8 Jul. 1988), p. 19.
- Coleman, Roger, The social impact of design, in *Issue*, no. 3, (spring 1990), pp. 6-7.
- Consuming interests (Manchester Polytechnic, seminar, Dec. 1986), in *Designer*,

- (March 1987), p. 30.
- Dormer, Peter, The cult of kitsch, in *Blueprint*, (Sep. 85), pp. 20-21.
- Douglas, Mary, O reason not the need!, in *Listener*, 98, (15 Sep. 1977), pp. 330-331.
- Elias, Helen, 1992: facing the facts, in *Designer's Journal*, no 40, (Sep. 1988), p. 17.
- Ellis, Peter, Social science, user research and the design process, in *Architect's Journal*, 167, 8 (Feb. 1978), p. 248.
- Fairley, Alisdair, A consumer's Europe, in *Listener*, 89, (4 Jan. 1973), p. 31.
- Fawcett, A., Taste: an exhibition about values in design, in *Studio International*, vol. 196, no 1003, (1983), pp. 8-11.
- Fisher, Volker, Post-Modernism and consumer design, in *Art & Design*, vol. 3, no 3/4, (1987), pp. 67-72.
- Fores, M. & Sorge, A. & Lawrence, P., Why Germany produces better?, in *Management Today*, (Nov. 1978), pp. 86+.
- Foster, Geoffrey, How to manage Europe, in *Management Today*, (Mar. 1973), pp. 112+.
- Glancey, Jonathan, National characteristics in Design, in *Boilerhouse Project*, (London, Victoria & Albert Museum, Copyright: The Conran Foundation, 1985) .
- Hall, Peter, Patterns of Economic Policy: an Organisational Approach, in *The State in Capitalist Europe*, ed. by S. Bornstein, D. Held, J. Krieger, Inc. Mass., Allen & Unwin, 1984).
- Hardt, Michael, 1992: design-szene Europa?, in *Form* (W. Germany), no 123, (1988), pp. 6-7.
- Hebdige, Dick, A report on the western front: Post-industrialism and the politics of style, in *Block 12*, (winter 1986-87), pp. 4-26.
- Hoggart, Richard, & Johnson, Douglas, & Tugendhat, Christopher, Context of home, an idea of Europe, in *Encounter*, 69, (Dec. 87), pp. 77-82.
- Hooley, G. J., Multidimensional scaling of consumer perceptions and preferences, in *European J. of Marketing*, 14, no. 7, (1980), pp. 436-48.
- Kumar, Krishan, Industrialism and post-industrialism: reflections on a putative transition, in *Sociological R.*, 24, (Aug 1976), pp. 439-478.
- Lasher, Margot D.; Carrol, John; Bever, Thomas G., The cognitive basis of aesthetic experience, in *Leonardo*, XVI/3, (summer 1983), pp. 196-199.
- Liebreich, Karen, Europa's children, search for a European cultural identity, in *Listener*, (15 June 1989), pp. 6-7.
- Lindbeck, Assar, The recent slowdown of productivity growth, in *Economic J.*, 93, (Mar. 83), pp. 13-34.
- Lodge, Greenagh, A tale of too much, in *Creative Review*, vol. 9, no 11, (Nov. 1989), p. 68.



- Lyon, David, From post-industrialism to information society, a new social transformation?, in *Sociology*, (20 Nov. 86), pp. 577-588.
- McAlhone, Beryl, A special issue on taste, in *Designer*, (Jan. 1983), p. 3.
- Moody, Stanley, National characteristics and industrial design, in Author's translation from published references: 1. Na'rodní Vlastnosti, v průmyslovém vytrácnictví, Trav. no 1, Vol. XXI (1970), pp 1-4 (in Czech). 2. Cechy narodowe we wzornictwie, Wiadomości instytutu wzornictwa przemysłowego, no 6-7 (1972), pp 1-26 (in Polish).
- Morris, Hugh, Where are the frontiers? The relationship between technological and social change, in *Royal Institute of British Architect's Journal*, 86, (Sep. 1979), pp. 399-400.
- Rose, Richard, Who can't get no satisfaction? The level-headed response of most Europeans to diminishing affluence, in *New Society*, (7 Aug. 1980), pp. I-II.
- Rusell, Cosmo, Europe in the new decade, in *Contemporary Review*, 236, (Feb. 1980), pp. 57-63.
- Serpell, Robert, How perception differs among cultures, in *New Society*, (22 Jun. 1972), pp. 620-623.
- Sparke, Penny, [Book Review]: Towards Post-Modernism: design since 1851 (by Collins, Michael), in *Journal of Design History*, vol. 1, (1988), pp. 81-82.
- Straver, Will, The consumerist movement in Europe: challenges and opportunities for marketing strategy, in *European J. of Marketing*, 12, (1978), pp. 316-325.
- Teire, John & Varney, David, Social values and technologiccal change. The shift working dilemma, in *Management Decision*, 9, (summer 1971), pp. 179-187.
- Vale, Jo, Hunting in packs, advertising agencies, lifestyle and consumer behaviour, in *Listener*, (23 Mar. 1989), pp. 14-15.
- Woodhuysen, James, Aesthetics of the new machine age, in *Blueprint*, no 41, (Oct. 1987), pp. 34-36.
- Worthington, John, Changing locations, changing buildings: the effects of new technology, in *Architect's Journal*, 176, (25 Aug 1982), pp. 24-25.
- Zenghelis, Elias, The aesthetics of the present, in *Architectural Design*, (3/4, 1988), pp. 66-67.

## SEMIOTICS AND PRODUCT SEMANTICS

### BOOKS

- Arnheim, Rudolf, *Visual Thinking*, (Berkeley & L. Angeles, University of California Press, 1969).
- Barthes, Roland, *Elements of Semiology*, (London, Jonathan Cape Ltd, 1967).
- Barthes, Roland, *Mythologies*, (London, Cape, 1972., originally publ.: Paris, Edition du Seuil, 1957).
- Barthes, Roland, *The Responsibility of Forms, Critical Essays on Music, Art and Representation*, (Oxford, Basil Blackwell, 1986).
- Baudrillard, Jean, *For a critique of the political economy of sign*, (St. Louis, Telos Press, 1981).
- Baudrillard, Jean, *Simulations*, (New York, 1983).
- Berger, John, *About looking*, (London, Writers and Readers, 1980).
- Berger, John, *Ways of seeing*, (Banbury, [s.n.], 1978).
- Broadbent, G. & Bunt, R. & Jencks, C (ed.), *Signs, Symbols and Architecture*, (New York, John Wiley & Sons, 1980).
- Broadbent, Geoffrey, *Meaning and Behaviour in the Built Environment*, (ed. by Broadbent, G. & Bunt, R. & Llorens, Tomas, Chichester, New York, J. Wiley, 1980).
- Cherry, Collin, *On Human Communication*, (Cambridge (Mass.), MIT Press, 2nd ed., 1968).
- Csikszentmihalyi, Mihaly and Rochberg-Halton Eugene, *The Meanings of Things, Domestic Symbols and the Self*, (Cambridge University Press, 1981).
- Eco, Umberto, *A Theory of Semiotics*, (Indiana University Press, 1976).
- Gombrich, E. H., *Art and Illusion, a Study in the psychology of Pictorial Representation*, (Oxford, Phaidon Press Ltd., 1977).
- Gombrich, E. H., *The image and the eye, Further Studies in the Psychology of Pictorial Representation*, (Oxford, Phaidon Press, 1986).
- Hawkes, Terence, *Structuralism and Semiotics*, (London, Methuen & Co. Ltd., 1977).
- Hebdige, Dick, *Subculture, the meaning of style*, (London, Methuen & Co. Ltd., 1979).
- Hesselgren, Sven, *Man's Perception on Man-made Environment, an Architectural Theory*, (Stroudsburg, Penn: Dowden, Hutchinson & Ross Inc.; Lund: Studentlitt, 1975).
- Jencks, Charles and Baird, George, *Meaning in Architecture*, (London, Barrie and Rockliff, The Cresnet Press, 1969).
- Jencks, Charles, *The Language of Post-Modern Architecture*, (New York, Rizzoli,



1977).

Langer, Suzanne, *Feeling and Form*, (Routledge & Kegan Paul Ltd., 1953).

Matejka, Ladislav & Titunic, Irwin, *Semiotics of Art Prague School Contributions*, (Mass., M.I.T. Press, 1976).

Norman, Donald A., *The Psychology of Everyday Things*, (New York, Basic Books Inc. Publishers, 1988).

Poster, Mark (ed.), *Jean Baudrillard, Selected Writings*, (ed. by Poster, Mark, Cambridge, Polity Press, 1988).

Robey, David (ed.), *Structuralism, an Introduction*, (Oxford, Clarendon Press, 1973).

Smith, Alfred (ed.), *Communication and Culture. Readings in the Codes of Human Interaction*, (New York, Holt, Rinehart and Winston Inc., 1966).

## ARTICLES

Athavankar, Uday A., The Semantic Profile of Products, in *Semantic Visions in Design*, proceedings from the Symposium on Design Research and Semiotics, (Helsinki, UIAH 1989).

Baker, Steve, "Semiologies and Design Theory (Review of 'In Search of Semiotics', by Sless David)", in *Art History*, 10, (June 1987), pp. 261-272.

Bayley, Stephen, "Opinion", in *Creative Review*, vol. 8, no 11, (Nov. 1988), pp. 4.

Bonsiepe, Gui, "Semantic Analysis", in *Ulm Journal*, (Apr. 1968), pp. 33-37.

Coates, Del, "Measuring Product Semantics with a Computer", in *Innovation*, vol. 7, no 4, (Fall 1988), pp. 7-10.

Cross, Annita, "Design Intelligence, the Use of Codes and Language Systems in Design", in *Design Studies*, vol. 7, pt 1, (Jan. 1986), pp. 14-18.

"Design and Communication, a Finnish-Japanese Seminar", in *Form Function Finland*, no1, (1987), pp. 12-20.

"Designing the Immaterial World", in *Design issues*, vol. 4, no 1 & 2, (1988), pp. 3-169.

Foster, Hal, "Subversive signs", in *Art in America*, LXX/10, (Nov. 1982), pp. 88-92.

Jencks, Charles, Symbolic Objects, in *Art & Design*, vol. 3, no. 3/4, (1987), pp. 63-66.

Krippendorff, Klaus; Vakeva, Seppo, The language of objects, in *Blueprint*, no. 58, (Jun. 1989), p. 52.

Krippendorff, K. and Butter, R., "Product Semantics, Exploring the Symbolic Qualities of Form", in *Innovation*, The Journal of the Industrial Designers' Society of America, vol. 3, no 2, (1984), pp. 4-9.

Kulbrik, Barbro, "What do Objects Communicate?", in *Form Function Finland*, pt 1, (1987), pp. 16-25.

Lara, Eve, Is the work of the designer based on meaning or function?, in *Form*,

- Function, Finland*, no. 3, (1989), pp. 34-39.
- Lupton, Ellen, "The Mystique of the Visual Language", in *AIGA Journal*, vol. 5, no 3, (1987), p. 9.
- McCoy, M., "Interpreting Technology through Product Forms", in *Industrial Design* (Japan), no 139-140, (1987), pp. 6-9.
- Morgan, Andrew, "In Praise of Semiotics", in *Design*, no 870 (?), (29 Jan. 1988), p. 17.
- Munro, C. F., "Semiotics, Aesthetics and Architecture", in *British Journal of Aesthetics*, 27, (spring 1987), pp. 115-128.
- Oehlke, Horst, In Search of Product Semantics, in *Semantic Visions in Design*, proceedings from the Symposium on Design Research and Semiotics, (Helsinki, UIAH 1989).
- Onck, van A., "Gestalten als Semiotischer Proceß", in *Form + Zweck*, ( D.D.R. Berlin), Heft 3, (1981), pp. 7-14.
- Product Semantics, in *Design Issues*, vol. 5, no. 2, (spring 1989), pp. 140, 142.
- Seligman, Claus, "What is a Door? Notes Towards a Semiotic Guide to Design", in *Semiotica*, XXXVIII/1-2, (1982), pp. 55-76.
- Wiberg, Marjo, "In Search of Meaning", in *Form Function Finland*, pt 2, (1987), pp. 16-25.



## DESIGN

### BOOKS

- Aldersey-Williams, Hugh, *New American Design, Products and Graphics for a post-industrial age*, (New York, Rizzoli international Publications Inc., 1988).
- Aldersey-Williams, Hugh, *World Design, Nationalism and Globalism in Design*, (New York, Rizzoli International Publ. Inc., 1992).
- Branzi, Andrea, *The Hot House. Italian New Wave Design*, (London, Thames and Hudson, 1984).
- Centre George Pompidou (ed.) *Design Français 1960-1990, trois déc'ennies*, (A. P. C. I., 1988).
- Coad, Emma Dent., *Spanish Design and Architecture*, ( London, Cassell, 1990).
- Dean, Yvonne, *Finishes*, (London, Mitchell's Building Series, 1989, first publ. 1971)
- Dietz Matthias and Mönninger, Michael, *Japan Design*, (Frankfurt, Taschen, 1992).
- Design Council (ed.), *Design and Industry*, (the proceedings of the Design and Industry Section of an international conference on design , London, 1984).
- Design Council (ed.), *Design and society*, (the proceedings of the Design and Society Section of an international conference on Design , London, 1984).
- Design Council (ed.), *Design and the Economy*, ( London, 1986, 4th ed).
- Dormer, Peter, *The meanings of modern design*, ( London, Thames and Hudson, 1990).
- Fischer, Volker, *Design now, industry or art?*, ( London, Thames and Hudson, 1990).
- Forty, Adrian, *Objects of desire*, (Design and Society 1750-1980, London, Thames and Hudson, 1986).
- Foster, Hal (ed.), *The Anti-aesthetic, essays on post-modern culture*, (Port Townsend Washington, Bay Press, 1983).
- Foster, Hal, *Recodings, Art, Spectacle, Cultural Politics*, (Seattle Washington, Bay Press, 1985).
- Gorb, Peter (ed.), *Design talks*, (London, the Design Council, 1988).
- Huygen, Frederique, *British Design: Image and Identity*, (London, Thames and Hudson, 1989).
- Julier, Guy, *New Spanish Design*, (London, Thames & Hudson, 1991).
- La Jolla Museum of Contemporary Art (ed.), *Italian Re-evolution; Design in Italian Society in the Eighties*, California, 1982).
- Libby, William Charles, *Colour and the structural sense*, (London, Prentice hall Inc., 1974).

- Lorenz, Christopher, *The Design Dimension; product strategy and the challenge of global marketing*, (Oxford, Basil Blackwell, 1987).
- Man transforms: aspects of design*, (exhibition 7 Oct. 1976- 6 Feb. 1977, New York, Cooper- Hewitt Museum, 1977).
- Margolin, Victor (ed.), *Design discourse: History, theory, criticism*, (Chicago, University of Chicago Press, 1990).
- Pickford, R. W., *Psychology and visual aesthetics*, (Hutchinson Educational 1972).
- Roy, Robin; Wield David, *Product Design and technological innovation*, (Open University Press, 1986).
- Russell, Beverly, *Architecture and Design: 1979-1990 New ideas in America*, (Abrams, 1990).
- Sparke, Penny, *An introduction to Design and Culture in the twentieth century*, (London, Allen & Unwin Ltd, 1986).
- Sparke, Penny, *Design in context*, (London, Bloomsbury Publishing Ltd, 1987).
- Sparke, Penny, *Did Britain make it? British Design in context 1946-86*, (London, The Design Council, 1986).
- Sparke, Penny, *Furniture, twentieth century design*, (London, Bell & Hyman, 1986).
- Sparke, Penny, *Italian Design, 1870 to the present*, (London, Thames and Hudson, 1988).
- Thackara, John (ed.), *Design after Modernism*, (London, Thames and Hudson, 1988).
- Thackara, John, *New British Design*, (London, Thames and Hudson, 1986).
- Wallis, Brian (ed.), *Art after modernism: rethinking representation*, (New York, The Museum of Contemporary Art, Boston Godine, 1984).

#### ARTICLES

- Aldersey-Williams, Hugh, In search of a cultural identity, in *Design Week*, vol. 4, no 19, (12 May 1989), p. 56.
- Atkinson, Terry, Art of the new Jerusalems, in *Artscribe*, 52, (May-June 1985), pp. 18-20.
- Bayley, Stephen and others, Putting on the style, in *New Society*, (22/29 Dec. 1983), pp. 8-9.
- Best, Alastair et al., The nineties: naughty, macabre or just more the same?, in *Designers' Journal*, no 50, (Sep. 89), pp. 42-49.
- Blackwell, Lewis, Outlook overcast, in *Creative Review*, vol.9, no 1, (Jan. 1989), pp. 14-16.
- Branzi, Andrea, We are the primitives, in *Design Issues*, vol. 3, no1, (spring 1987).
- Broadbent, Geoffrey, Functionalism vs Post-Modernism, in *Art & Design*, vol. 3, no 3/4, (1987), pp. 73-75.



- Burkhart, Francois, Tendencies of German design theories in the past fifteen years, in *Design Issues*, vol. 3, no 2, (Fall 1986), pp. 31-36.
- Cole, Gabriel Orteig, The recent trends of industrial design in Spain, in *Design Journal*, no 24, (10 Feb./10 Mar. 1990), pp. 14-15.
- Dormer, Peter, 'Fat' is a design issue, in *Design Week*, vol. 2, no 7, (20 Feb. 1987), pp. 14-15.
- Dormer, Peter, Metaphor or marketing, in *Design*, no 470, (Feb. 1988), p. 16.
- Dormer, Peter, The material world, in *Design Week*, vol.2, no 10, (13 Mar. 1987), p. 21.
- Ekuan, Kenji, The landscape of Design creation, in First International Design Forum proceedings (19-23 Oct. 1988), Singapore, First international Design Forum, (1988).
- Ingram, Jack, The meet market, in *Design Week*, vol.2, no 18, (8 May 1987), p. 10.
- Italian design update, in *Design World*, no13, (1987), pp. 34-37.
- Jones, Mike, German by Design, in *Design*, no 494, (Feb. 1990).
- Lamacraft, Jane, The design decade, in *Direction*, (Dec. 1989), pp. 18-21.
- Lawson, Thomas, The dark side of the bright light, in *Artforum* XXI/3, (Nov.1982), pp. 62-66.
- Maldonado, Tomas, Unesco Seminar Report on the Education of Industrial Designers, (Bruges: March 1964).
- Margolin, Victor, Corporate interests dominate Worldesign, '85 Congress in D. C., in *New Art examiner*, XIII/7, (Mar. 1986), pp. 32-35.
- Mars, Tim, A golden past - a plastics future?, in *Design*, no 480, (Dec. 1988), p. 15.
- McFadden, D. R., Design is also a verb, in *Form Function Finland*, no 2, (1985), pp. 46-47.
- Mendini, Alessandro, Object, in *Artforum*, XXV/4, (Dec. 1986), p. 7.
- Moody, Stanley, National characteristics and Industrial Design, author's translation from published references: 1.Národní Vlastnosti, v průmyslovém vytráření, Trav. no 1, Vol. XXI (1970), in Czech. 2. Cechy narodowe we wzornictwie, Wiadomosci instytutu wzornictwa przemysłowego, no 6-7 (1972), in Polish.
- New, Colin, Manufacturing in the 1980s, in *Management Today*, (Oct. 79), pp. 98+.
- Olds, Andrew, Sculpture and the industrial object, in *ID: Magazine of International Design*, vol. 35, no 5, (Sep.-Oct. 1988), pp. 68-71.
- Poynor, Rick, Softtech, in *Blueprint*, no 49, (Jul./Aug. 1988), pp. 28-31.
- Schepers, Wolfgang, They like us rough, in *Modo*, no 407, (June/July 1988), pp. 9-11, 42-45.
- Sober, Richard, Stop dictating, start innovating, in *Design*, no 484, (Apr. 1989), p. 23.

Sterner, Donald, Design as a fashion statement, in *AIGA Journal*, vol. 5, no 1, (1987), pp. 1,12.

Stone, Dominic, The great divide, in *Design*, no. 494, (Feb. 1990), pp. 32-36.

Thackara, John, Fog warnings, in *Design*, no. 493, (Jan 1990), p. 8.

## OFFICE

### BOOKS

Delgado, Alan, *The Enormous File; a Social History of the Office*, (John Murray, 1979).

Dormer, Peter, *The New Furniture Trends and Traditions*, (London, Thames and Hudson, 1987).

Key, Note Publications Ltd (ed.), *Office Furniture: an Industry Sector Overview*, (Hampton, Middlesex, 1986, 4th ed.).

Klein, Judy Craf, *The Office book: Ideas and Designs for Contemporary Work Spaces*, (London, Frederick Muller, 1982).

Knobel, Lance, *Office Furniture*, (Unwin Hyman, 1987, Twentieth Century Design).

Lloyd, Bruce, *Offices and Office Work: the Coming Revolution*, (London, Stainland Hall Associates Ltd., 1990).

Mudie, Peter & Cottam, Angela, *The Management and Marketing of Services*, (Oxford, Butterworth-Heinemann Ltd, 1993, Contemporary Business Series).

Sundstrom, Eric, *Work Places, the Psychology of the Physical Environment in Offices and Factories*, (Cambridge, Cambridge University Press, 1986).

Wineman, Jean D. (ed.), *Behavioral Issues in Office Design*, (London, Van Nostrand Reinhold, 1986).

### ARTICLES

Allen, Lewis, A green office guide, in *Design Week*, vol. 5, no 21, (1 Jun.90), p. 13.

Arthur, Catherine, Are you sitting comfortably?, in *Graphics World*, no 66, (May/June 1987), pp. 52-54, 56.

Barden, John, A large show in Germany, in *Designer's Journal*, no 43, (Jan. 1989), pp. 41-44.

Buttery, Helen, Debunking the boss's chair, in *Design*, no 462, (Jun. 1987), pp. 38-41.

Campbell, D. E., Interior Office Design and visitor response, in *Journal of Applied Psychology* 64 (6), (1979), pp. 648-653.

Caple, David, Current trends in office chairs. A survey of currently available chairs for offices, in *Design World*, no 14, (1988), pp. 1-7.

Cooper, Rodney, Vocabulary of office space, in *Architect's Journal*, 178, (23 Nov. 83), pp. 133-136.



- Cruickshank, Dan K., Origins of offices, in *Architectural Review*, 174, (Nov. 83), pp. 81-84.
- Diani, Marco, The social significance of office automation, in *Design Issues*, Vol. 3, no. 2, (Fall 1987), pp. 73-82.
- Duffy, Francis & Waters, Brian, Squaring up for the Big Bang: the automated electronic office in the City of London, in *Building*, (28 Mar. 86), pp. 30-34.
- Duffy, Francis, Buildings update - Offices: the changing workplace, in *Architect's Journal*, (27 Sep. 1989), pp. 77-81.
- Duffy, Francis, Buildings update: Offices, in *Architect's Journal*, 174, (11 Nov. 1981), pp. 951-964.
- Duffy, Francis, Connections in low places, in *Architecture Today*, no 1, (Sep. 89), pp. 46-47.
- Duffy, Francis, Form or substance, in *Architect's Journal*, (23 Apr. 86), pp. 43-46.
- Duffy, Francis, Offices: an escape from banality, in *The Architectural Review*, 174, (Nov. 83), pp. 31-35.
- Duffy, Francis, The European Challenge, in *Architect's Journal*, (17 Aug. 88), pp. 30-43.
- Gershuny, Jonathan, Life-style, innovation and the future of work, in *Royal Society of Arts Journal*, 135, (Jun. 87), pp. 492-499.
- Glaskin, Max, Are you sitting comfortably?, in *Design*, no 483, (Mar. 1989), pp. 34-36.
- Interni (ed.), Ufficio '90, in *Interni Annual: International Office Furnishings*, (1990).
- Jones, Mike, Home advantage?, in *Design*, no 487, (Jul. 1989), pp. 32-35.
- Knobel, Lance, Making it for modern times, in *Management Today*, (May 1989), p. 35.
- Kobayashi, Yumiko, Trends in office interiors in EIMU 89, in *Axis*, vol. 34, (winter 90), pp. 44-51+s.3-4.
- Krieks, H., We are witnessing the beginning of the end of the office landscape, in *Interiors*, (Feb. 1980), pp. 82, 86.
- Morgantini, M., The office of the telematic nomad, in *Modo*, no 89, (May 1986), pp. 26-31.
- Morteo, Enrico, Designwerkstaff Berlin: furniture for the workplace, in *Domus*, no 701, (Jan. 1989), pp. 1-3.
- Office Work module: privacy with openness and flexibility, in *Innovation*, vol. 6, no 1, (winter 1987), pp. 7-9.
- Poynor, Rick, Company colours, in *Designer's Journal*, no. 30, (Oct. 1987), pp. 58-61.
- Reid, Alex, Bringing technology into the Office, in *Architect's Journal*, 176, (25 Aug. 1982), p. 16.

- Shirley, Steve, Re-inventing the place of work: the distributed office, in *Royal Society of Arts Journal*, 135, (Jun. 87), pp. 503-509.
- Smith, Wendy, Bomb the beige, in *Design Week*, vol. 4, no 18, (5 May 1989), p. 16.
- Softer systems for the ergonomic office, in *Blueprint*, no 53, (Dec. 1988/Jan. 1989), p. 8.
- Stead, Paul, Europeans set style in office furniture, in *Design Week*, vol. 3, no. 44, (4 Nov. 1988), p. 13.
- The appliance of science: what will automated offices be like, in *Architect's Journal*, 176, (2 Dec. 1982), pp. 50-52, 54.
- Towards a new typology, in *Ottagono*, no 89, (Jun. 1988), pp. 98-101.
- Worthington, John, Workspace: loose-fit and specific, the effects of technological change, in *Architect's Journal*, 176, (25 Aug. 1982), pp. 30-31.



## APPENDIX

## I. MARKET SURVEY: LIST OF SUBJECTS

Firms and organisations contributing to the research by answering the questionnaires and providing with illustrative material:

### Office furniture manufacturers (60).

#### Germany (11)

Fröscher Sitform  
Gumpo Büromöbel  
Hahne Stahlbüros GMBH & CO.KG  
VOKO  
Drabert  
Grahl  
Interstuhl  
Vitra  
WINI Büromöbel  
Leuwico  
rohde Büromöbelwerk

#### Greece (4)

Biró  
Palivos E.B.E.E.  
Skouropoulos

#### Italy (24)

SATO  
Schirolli  
Saporiti Italia  
Schiroliares s.r.l.  
PIALT s.r.l.  
COM  
Cocconi s.r.l.  
ZERO (Quattroccio s.r.l.)  
IB office  
SAGSA S.p.A.  
B&B Italia  
Skipper  
Primula Arredamenti Metallici  
Pierluigi Ghianda  
Lamm



	Ca'Onorai S.p.A.
	Costi & C
	Tecno
	Sesta s.r.l.
	Linea Ufficio
	Primula
	Matteograssi
	Sedus Stoll s.r.l.
	Crivellari
	emmegi Monselarredo spa
Spain (4)	Mobel Linea s.l.
	ASSIS Mobiliario
	Grupo Permasa
	Galo Ben
United Kingdom (17)	Pel Ltd.
	Grant Westfield Ltd.
	Black Arrow
	Wilkinsons Furniture
	Antocks Lairn Group
	Flexiform
	Magpie
	Marcatré (UK)
	Egglin group
	Triumph
	Pearl Dot
	Hille
	Turberville Smith
	tek Furniture Ltd
	Peter Haxworth & Co
	Wilkahn
	Ben Dawson Furniture

## **Banks (35).**

Germany (9)	Bayerische Verensbank
	Commerzbank
	Dresdner Bank

	BHF - Bank
	Schmidt Bank
	Bayerische Hypotheken und Wechsel Bank
	Landeszentralbank in Bayern
	Landeszentralbank in Schleswig-Holstein
	Berliner Volksbank
Greece (3)	Bank of Central Greece
	Agricultural Bank of Greece
	Credit Bank
Italy (10)	Istituto Bancario San Paolo di Torino
	Banca Popolare dell' Emilia
	Credito Commerciale
	Banca Popolare di Bergamo
	Banco di Roma
	Banca Popolare di Verona
	Banca Provinciale Lombarda S.p.A.
	Banco di Napoli
	Credito Varesino
	Credito Romagnolo
Spain (4)	Banco Urquijo
	Banco Zaragozano
	Banco Bilbao Vizcaya
	Banco Hispano Americano
United Kingdom (9)	Clydesdale Bank PLC
	Yorkshire Bank
	TSB Bank
	Moscow Narodny Bank Ltd.
	Bank of Scotland
	The Royal Bank of Scotland
	National Westminster Bank
	Lloyds Bank
	Coutts & Co.



II. QUESTIONNAIRE ON CONTEMPORARY OFFICE FURNITURE DESIGN AND PRODUCTION

## SECTION A: COMPANY

1. Please indicate name and address of the company, and your name.

Name of the company	Address of the company
Your name and position	

2. Do you export your products?

- ☐ YES: ☐ To Belgium ☐ To Denmark ☐ To France ☐ To Gr. Britain  
☐ To Greece ☐ To Ireland ☐ To Italy ☐ To Luxemburg  
☐ To Netherlands ☐ To Portugal ☐ To Spain ☐ To W. Germany  
☐ Outside EEC

☐ NO

3. Do you import components, or materials?

- ☐ YES: ☐ From Belgium ☐ From Denmark ☐ From France ☐ From Gr. Britain  
☐ From Greece ☐ From Ireland ☐ From Italy ☐ From Luxemburg  
☐ From Netherlands ☐ From Portugal ☐ From Spain ☐ From Germany  
☐ Outside EEC

☐ NO

4. Do you produce the same products for the different countries of your overseas operations?

(Complete if appropriate)

- ☐ YES ☐ NO

5. To what extent, in your opinion, do the following factors influence your production?

	To a very great extent	To a great extent	To some extent	Not at all
National economy	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
International economy	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Oil crisis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Politics	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Government policy concerning manufacturers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Government policy concerning middle class income	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Government policy concerning upper class income	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mass media	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other countries' production similar to yours	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Technological evolution	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Architectural tendencies	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Design tendencies	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Others (specify)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

6. Is there a relationship between your country's tradition in furniture and your own production?

- ☐ YES: ☐ In materials ☐ In techniques ☐ In design ☐ In specific products ☐ Others (specify)  
☐ NO

7. How far in the future do you plan your production for?

- ☐ 1 - 3 years ☐ 3 - 5 years ☐ 5 - 10 years ☐ 10 years or more

8. What are your aims and plans as far as the market is concerned for the 90's?

- ☐ New branches ☐ New ways of advertising ☐ New target groups ☐ More services to be provided  
☐ Less services to be provided ☐ More specialised production ☐ Wider production ☐ Others (specify)

9. In which ways do you advertise your products?

- ☐ Exhibitions ☐ Brochures ☐ Radio ☐ Magazines ☐ Newspapers ☐ T.V.  
☐ Happenings ☐ Sponsorships ☐ Do not advertise ☐ Others (specify)

## SECTION B: DESIGNERS

10. What categories of designer do you employ?

- ☐ Interior designers ☐ Industrial designers ☐ Furniture designers ☐ Architects  
☐ Engineering designers ☐ Draughtsmen ☐ None  
☐ Others (specify)

11. If your answer to the previous question (no. 10) was 'None', do you:

- ☐ Manufacture under licence  
☐ Use other in-house personnel (e.g. manager). Please specify  
☐ Engage freelance designers for specific commissions



12. Have you ever used design and/or marketing consultants? Please indicate, if possible, name and address.

☐ YES:

1.

2.

☐ NO

## SECTION C: DESIGN AND PRODUCTION OF THE COMPANY

13. Which of the following concepts and attributes have been reflected in the form of your products during the periods indicated?

Concepts	1970 - 75	1975 - 80	1980 - 85	1985 - 90
Luxury				
Comfort				
Status				
Durability				
Functionality				
Flexibility				
Individuality				
Informality, Relaxation				
Austerity				
Innovation				
Others (specify)				

14. By which of the indicated means have the following concepts and attributes been reflected in your production?

Concepts \ Means	Bright Colours	Dark Colours	Pastel Colours	Wood	Metal	Glass	Leather	Plastic	Laminates	Upholstery	Combination of Materials	Limited number of Materials	Simple Form & Design	Complex Form & Design	Light Construction	Heavy Construction	Rounded Shapes	Sharp Edged Shapes	Technological Effects	Craftmanship	Minimized Dimensions	Maximized Dimensions	Variety in Seating Positions	Accessories	Symbolic forms
Luxury																									
Comfort																									
Status																									
Durability																									
Functionality																									
Flexibility																									
Individuality																									
Informality, Relaxation																									
Austerity																									
Innovation																									
Others (specify)																									

15. What is your attitude as far as the form of your production is concerned?

- ☐ You always try to match the commercial style of a particular period.  
☐ You follow new style tendencies only when they are well established in the market.  
☐ You insist on what you believe as right, even if it contradicts with the market tendencies.

16. When did you change your products' appearance during the last 20 years and why?

e.g. ☐ 1973 ☒ 1973 B

<input type="checkbox"/> 1970	<input type="checkbox"/> 1971	<input type="checkbox"/> 1972	<input type="checkbox"/> 1973	<input type="checkbox"/> 1974
<input type="checkbox"/> 1975	<input type="checkbox"/> 1976	<input type="checkbox"/> 1977	<input type="checkbox"/> 1978	<input type="checkbox"/> 1979
<input type="checkbox"/> 1980	<input type="checkbox"/> 1981	<input type="checkbox"/> 1982	<input type="checkbox"/> 1983	<input type="checkbox"/> 1984
<input type="checkbox"/> 1985	<input type="checkbox"/> 1986	<input type="checkbox"/> 1987	<input type="checkbox"/> 1988	<input type="checkbox"/> 1989

- A. To use new technology in manufacture  
 B. To launch an innovative product  
 C. To adjust your production to new tendencies of the market  
 D. To alter products due to economic conditions  
 E. To match the change in your target group demands  
 F. To improve the quality of your products  
 G. For another reason (specify)

## SECTION D: CONSUMERS

17. To what extent, in your opinion, does design affect social values and attitudes, and by which of the following means?

	To a very great extent	To a great extent	To some extent	Not at all
By promoting the use of specific materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By establishing new needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By introducing new technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By changing the public's taste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By changing the public's spatial behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otherwise (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. How influential in your opinion, are each of the following factors on your consumers' taste?

	Very influential	Influential	Quite influential	Not at all influential
Mass media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Individual designers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fashion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Class, culture or group standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change in practical needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change in psychological needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Please indicate, by rating each one out of ten, the factors that led your clients to approach you instead of your competitors. (10 equals greatest importance and 1 equals least importance)

<input type="checkbox"/> Better performance	<input type="checkbox"/> Better service	<input type="checkbox"/> More innovative design
<input type="checkbox"/> Faster delivery	<input type="checkbox"/> Lower cost	<input type="checkbox"/> More successful advertising
<input type="checkbox"/> Reliability	<input type="checkbox"/> Durability	<input type="checkbox"/> Wider range of production
<input type="checkbox"/> Reputation in the market	<input type="checkbox"/> Others (specify)	

20. Which large scale offices within the financial services sector have you supplied during the last twenty years?

Name of the company	Address	Year

21. Please indicate if you would be willing to be of further assistance in the near future, e.g. additional correspondence, or personal interview.

☐ YES ☐ NO

22. Please indicate if it is possible to contact with you in English.

☐ YES ☐ NO



## LIST OF CHARTS

2.1.	(Question 2)	Export of Products (General).
2.2.	(Question 2)	Export of Products (Countries).
3.1.	(Question 3)	Import of Components or Materials (General).
3.2.	(Question 3)	Import of Components or Materials (Countries).
4.	(Question 4)	Production of the Same Products for different Countries of Overseas Operations.
5.1.	(Question 5)	National Economy Influencing Production.
5.2.	(Question 5)	International Economy Influencing Production.
5.3.	(Question 5)	Oil Crisis Influencing Production.
5.4.	(Question 5)	Politics Influencing Production.
5.5.	(Question 5)	Government Policy Concerning Manufacturers Influences Production.
5.6.	(Question 5)	Government Policy Concerning Middle Class Income Influences Production.
5.7.	(Question 5)	Government Policy Concerning Upper Class Income Influences Production.
5.8.	(Question 5)	Mass Media Influencing Production.
5.9.	(Question 5)	Other Countries' Production Influencing Production.
5.10.	(Question 5)	Technological Evolution Influencing Production.
5.11.	(Question 5)	Architectural Tendencies Influencing Production.
5.12.	(Question 5)	Design Tendencies Influencing Production.
5.13.	(Question 5)	Other Factors Influencing Production.
5.14.	(Question 5)	Factors Influencing Production.
6.1.	(Question 6)	Relationship between Tradition in Furniture and Company's Production (General).
6.2.	(Question 6)	Relationship between Tradition in Furniture and

		Company's Production (Relations).
7.	(Question 7)	Time Plan of Production.
8.	(Question 8)	Aims and Plans for the 90s Market.
9.	(Question 9)	Ways of Advertising.
10.	(Question 10)	Categories of Designers Employed by the Company.
11.	(Question 11)	Design Methods in Case that the Company does not Employ Designers.
13.1.	(Question 13)	Luxury Reflected in the Form of Products.
13.2.	(Question 13)	Comfort Reflected in the Form of Products.
13.3.	(Question 13)	Status Reflected in the Form of Products.
13.4.	(Question 13)	Durability Reflected in the Form of Products.
13.5.	(Question 13)	Functionality Reflected in the Form of Products.
13.6.	(Question 13)	Flexibility Reflected in the Form of Products.
13.7.	(Question 13)	Individuality Reflected in the Form of Products.
13.8.	(Question 13)	Informality-Relaxation Reflected in the Form of Products.
13.9.	(Question 13)	Austerity Reflected in the Form of Products.
13.10.	(Question 13)	Innovation Reflected in the Form of Products.
13.11.	(Question 13)	Concepts Reflected in the Form of Products During the Period 1970-1990.
14.1.	(Question 14)	Means by Which Luxury is Reflected in the Form of Products.
14.2.	(Question 14)	Means by Which Comfort is Reflected in the Form of Products.
14.3.	(Question 14)	Means by Which Status is Reflected in the Form of Products.
14.4.	(Question 14)	Means by Which Durability is Reflected in the Form of Products.



- |        |               |   |
|--------|---------------|---|
| 14.5.  | (Question 14) | Means by Which Functionality is Reflected in the Form of Products.                  |
| 14.6.  | (Question 14) | Means by Which Flexibility is Reflected in the Form of Products.                    |
| 14.7.  | (Question 14) | Means by Which Individuality is Reflected in the Form of Products.                  |
| 14.8.  | (Question 14) | Means by Which Informality and Relaxation are Reflected in the Form of Products.    |
| 14.9.  | (Question 14) | Means by Which Austerity is Reflected in the Form of Products.                      |
| 14.10. | (Question 14) | Means by Which Innovation is Reflected in the Form of Products.                     |
| 14.11. | (Question 14) | Means by Which Other Concepts and Attributes are Reflected in the Form of Products. |
| 14.12. | (Question 14) | Means by Which Concepts and Attributes are Reflected in the Company's Production.   |
| 15.    | (Question 15) | The Company's Attitude Towards the Form of Production.                              |
| 16.1.  | (Question 16) | Years of Changes in the Appearance of Company's Products.                           |
| 16.2.  | (Question 16) | Reasons for Changing the Appearance of Products.                                    |
| 17.1.  | (Question 17) | Design Affects by Promoting the Use of New Materials.                               |
| 17.2.  | (Question 17) | Design Affects by Establishing New Needs.   |
| 17.3.  | (Question 17) | Design Affects by Introducing New Technology  |
| 17.4.  | (Question 17) | Design Affects by Changing the Public's Taste.                                      |
| 17.5.  | (Question 17) | Design Affects by Changing the Public's Spatial Behaviour.                          |
| 17.6.  | (Question 17) | Design Affects Otherwise.   |

- |       |               |   |
|-------|---------------|---|
| 17.7. | (Question 17) | Means by Which Design Affects Social Values and Attitudes.      |
| 18.1. | (Question 18) | Mass Media Influencing Consumers' Taste.                        |
| 18.2. | (Question 18) | Individual Designers Influencing Consumers' Taste.              |
| 18.3. | (Question 18) | Fashion Influencing Consumers' Taste.                           |
| 18.4. | (Question 18) | Class, Culture or Group Standards Influencing Consumers' Taste. |
| 18.5. | (Question 18) | Change on Practical Needs Influencing Consumers' Taste.         |
| 18.6. | (Question 18) | Change on Psychological Needs Influencing Consumers' Taste.     |
| 18.7. | (Question 18) | Other Factors Influencing Consumers' Taste.                     |
| 18.8. | (Question 18) | Factors Influencing Consumers' Taste.                           |
| 19.   | (Question 19) | Importance of Factors in the Market.                            |



## ANALYSIS OF THE QUESTIONNAIRE : DIAGRAMS AND TABLES

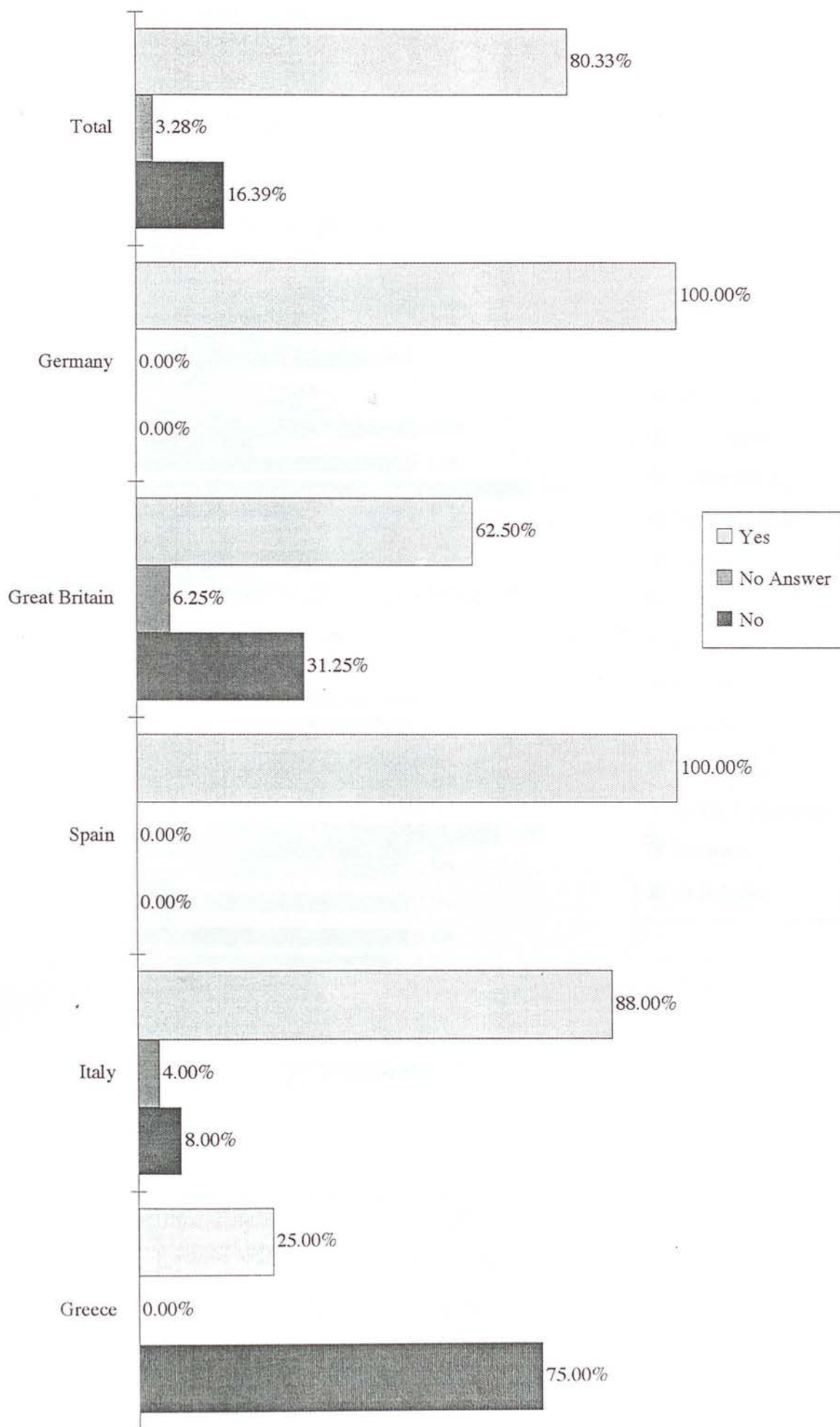


Chart.2.1

Export of Products (General)



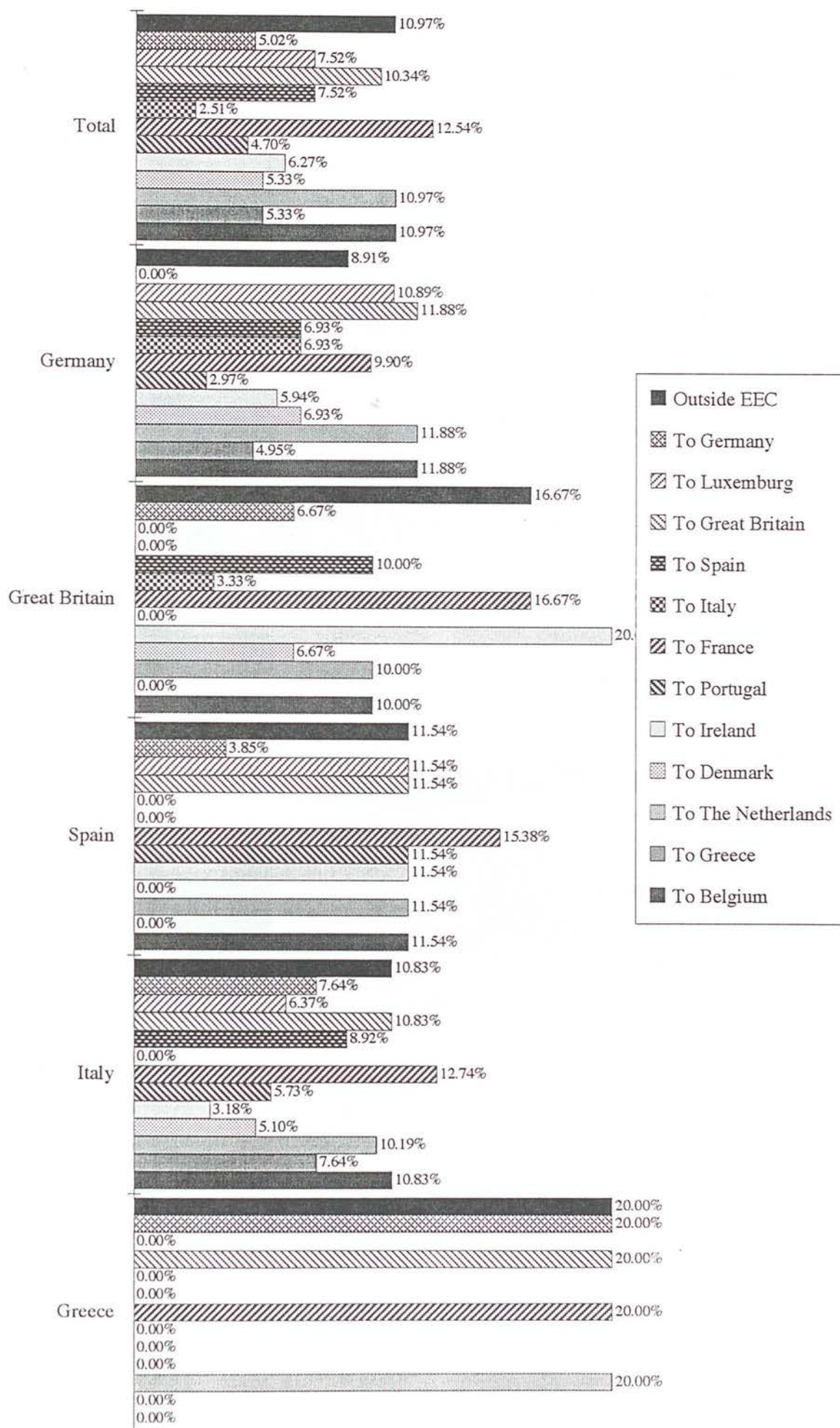


Chart.2.2

Export of Products (Countries)

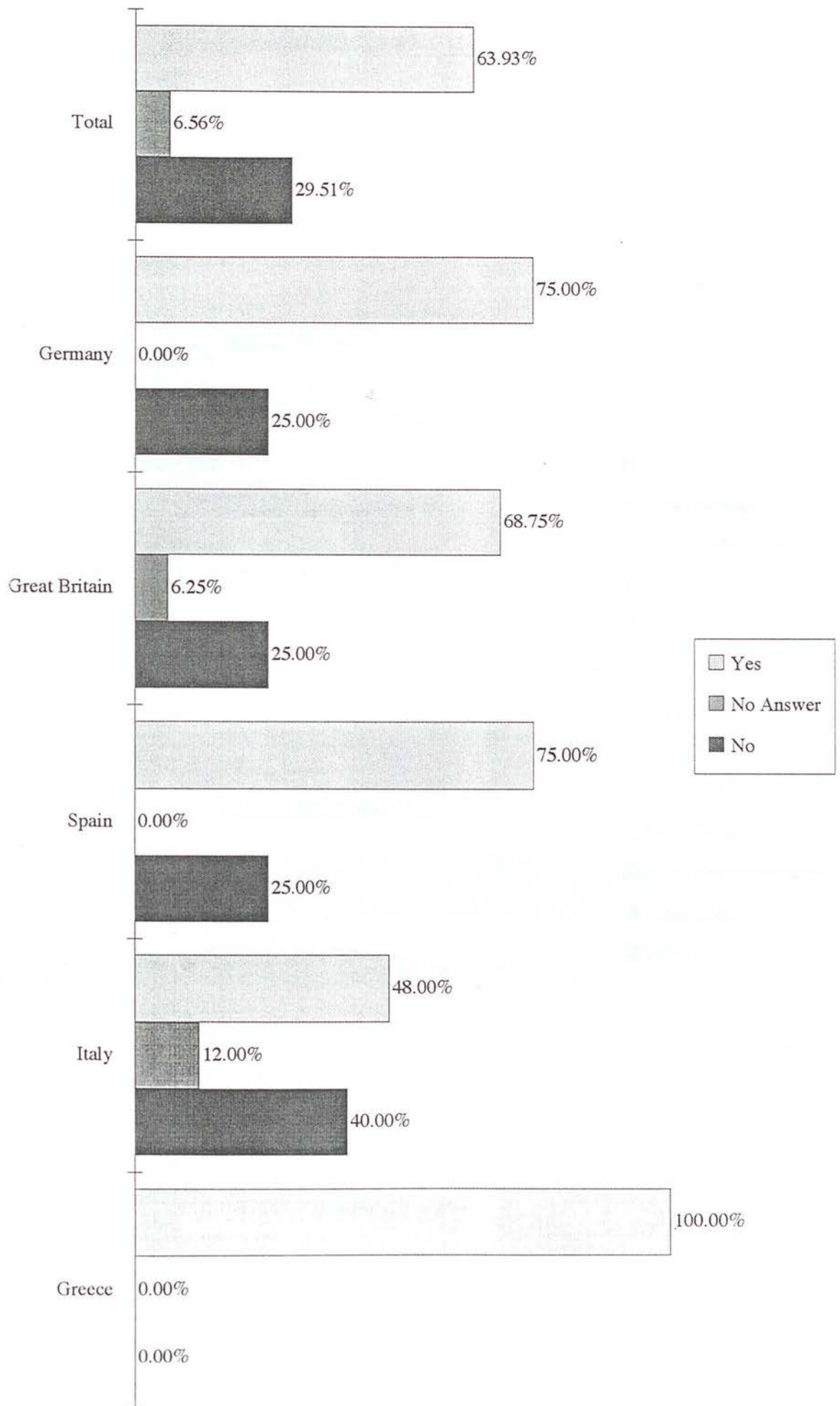


Chart.3.1

Import of Components or Materials (General)



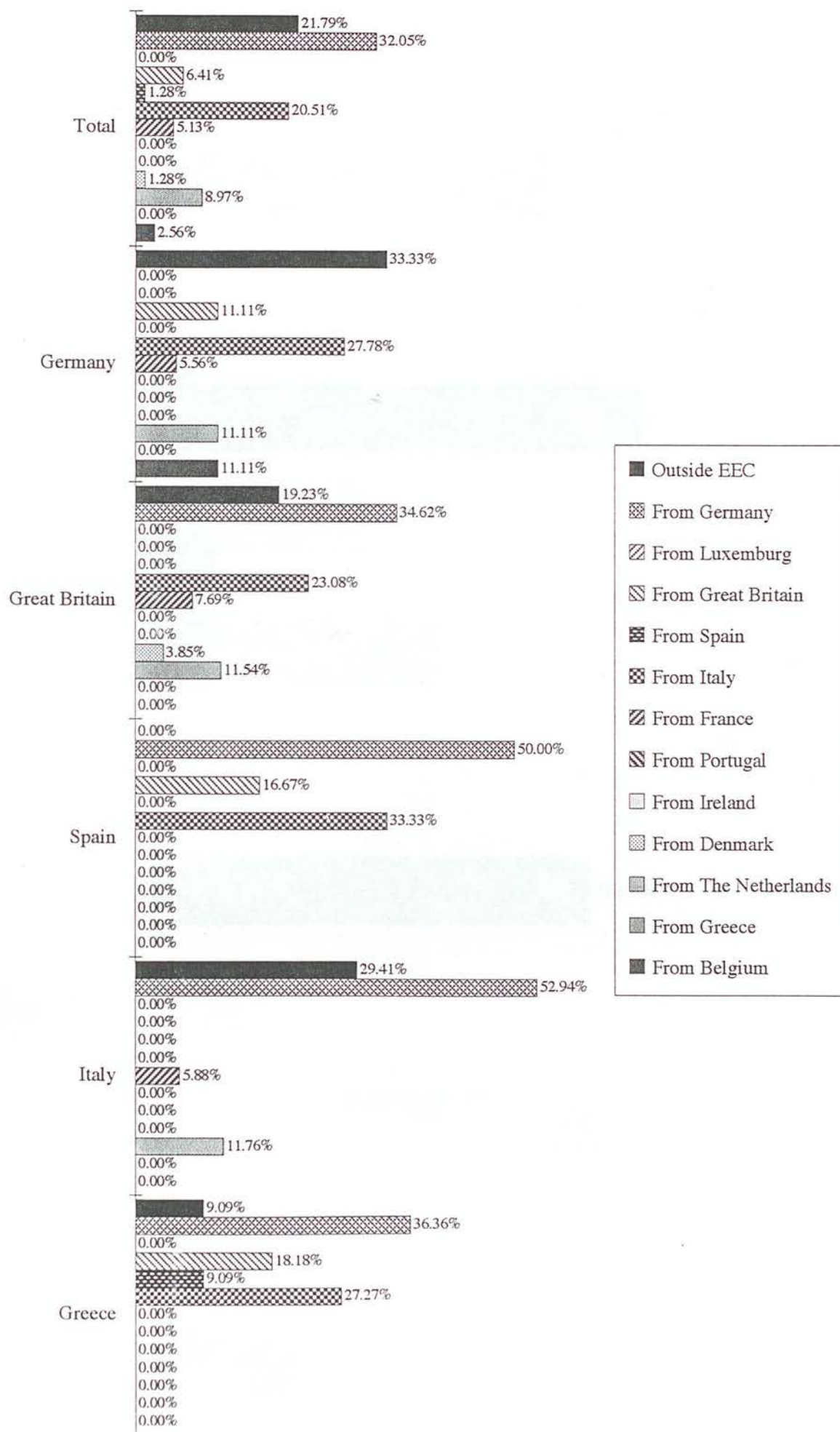


Chart.3.2

Import of Components or Materials (Countries)

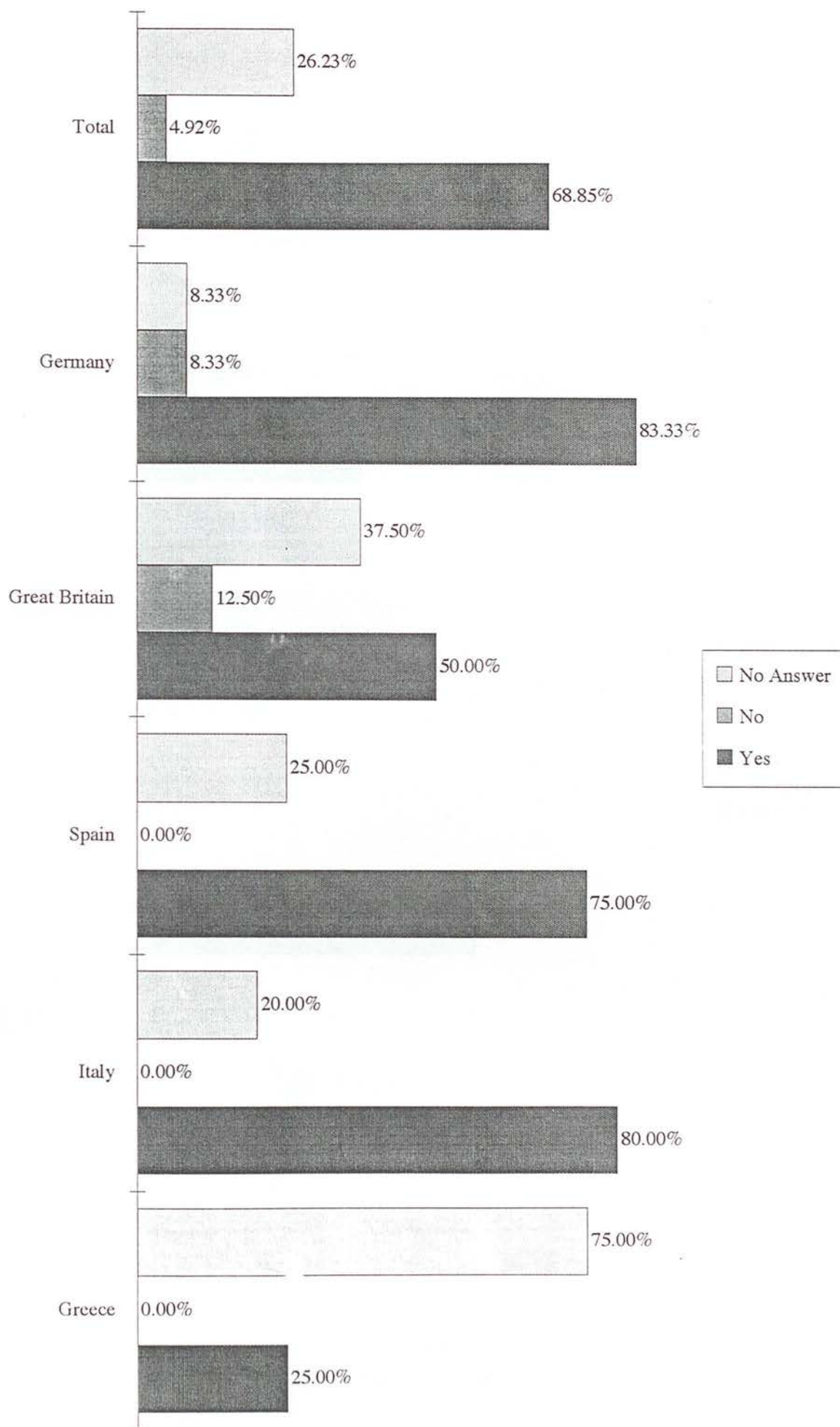


Chart.4 Production of the Same Products for Different Countries of Overseas Operations



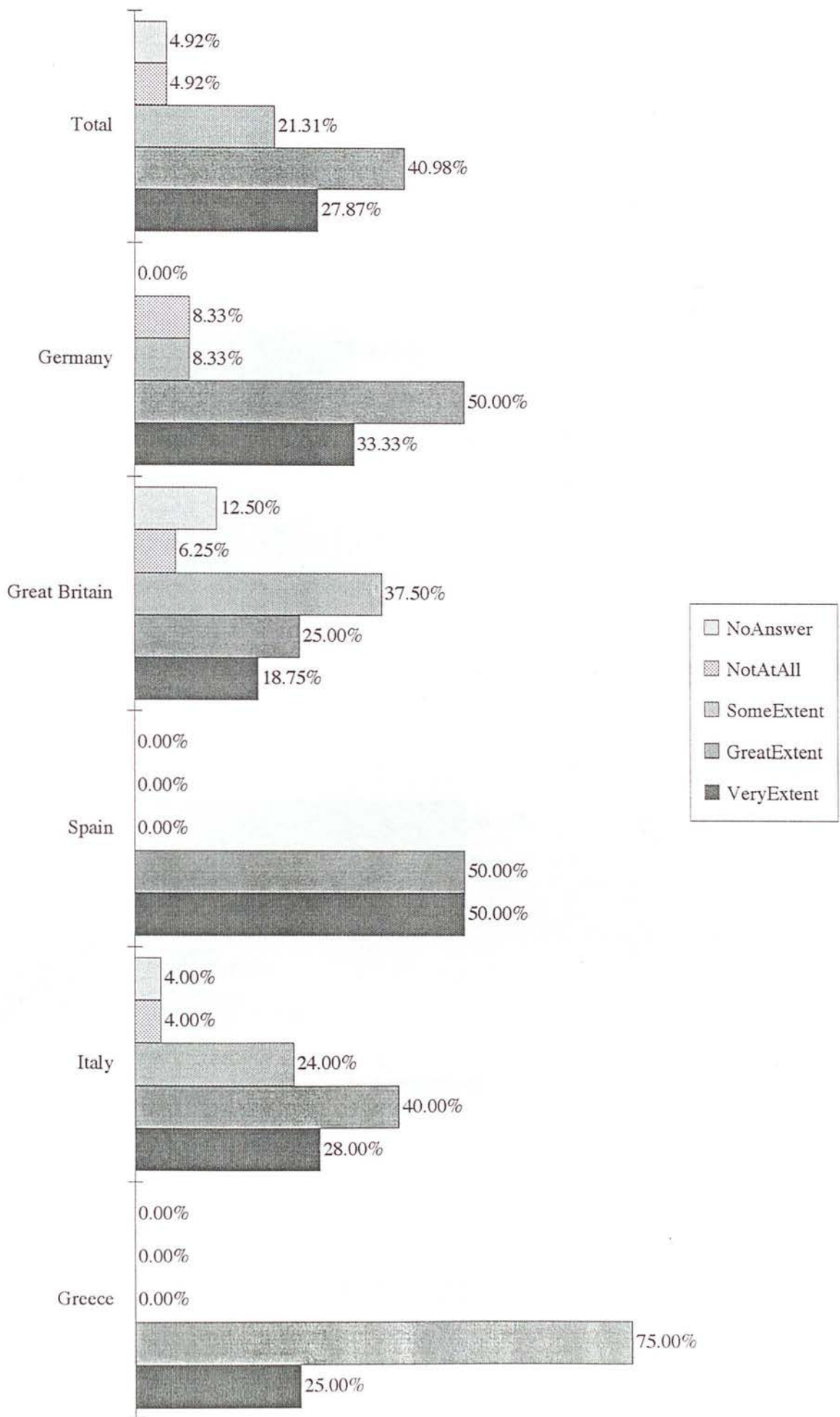


Chart.5.1

National Economy Influencing Production

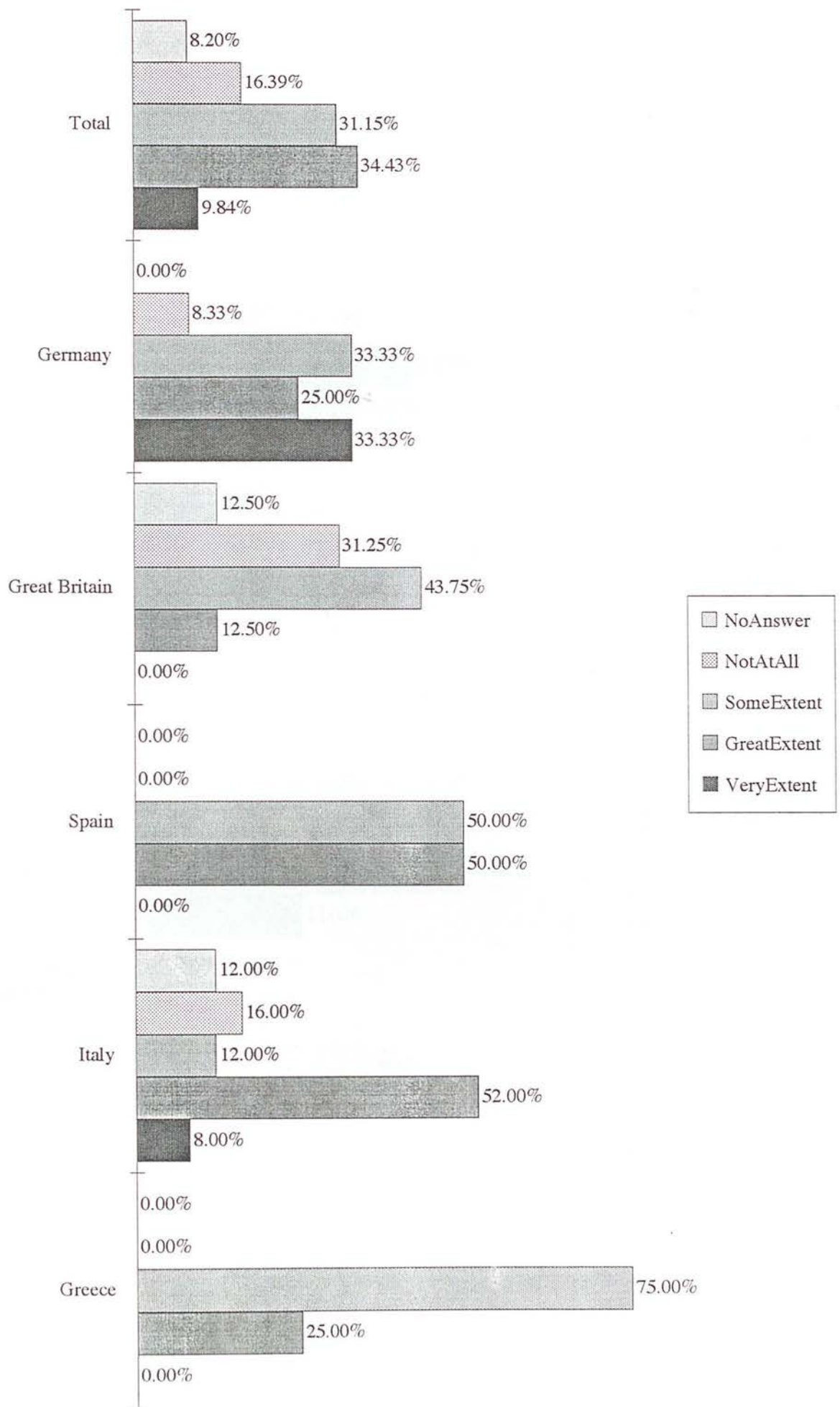


Chart.5.2

International Economy Influencing Production



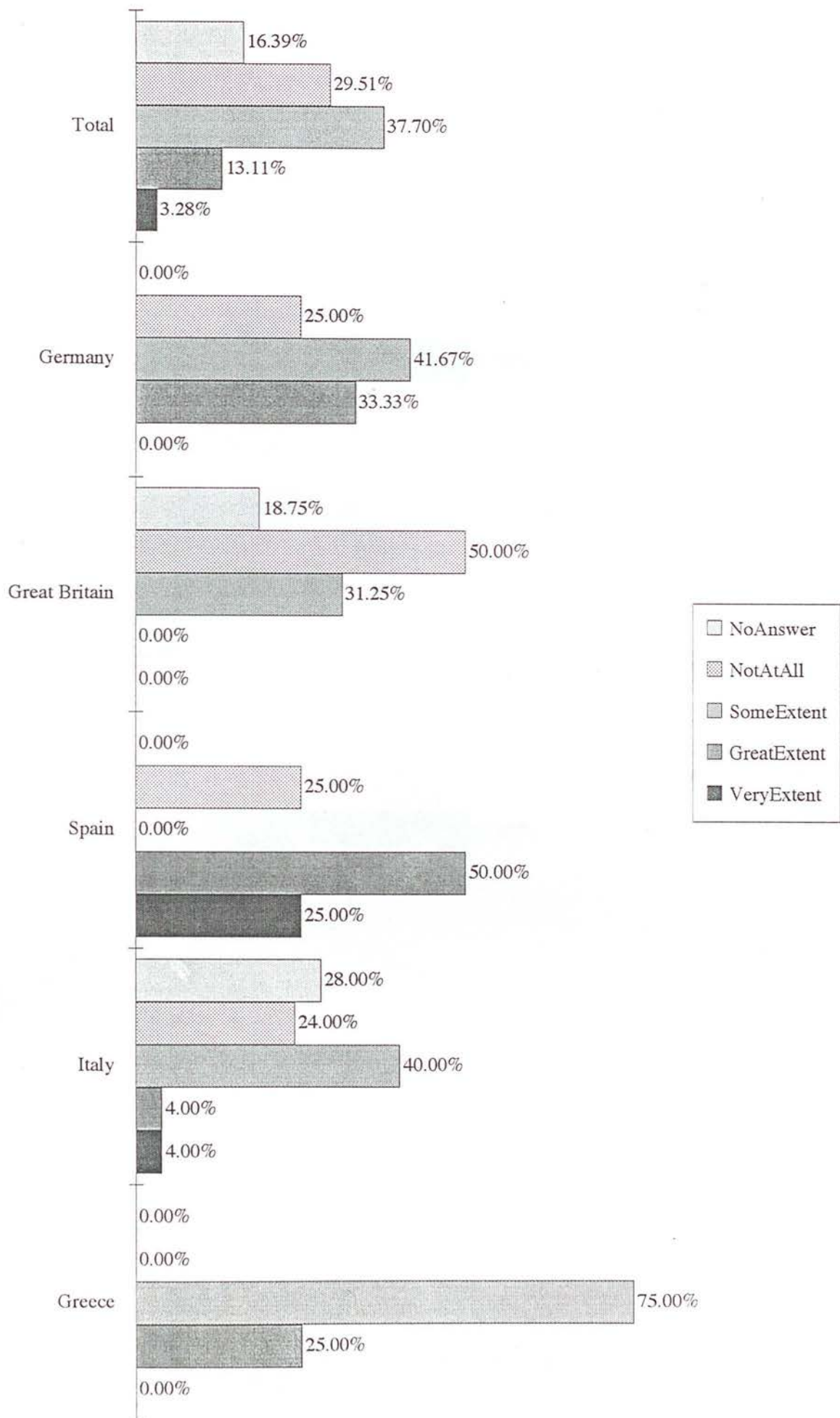


Chart.5.3

Oil Crisis Influencing Production

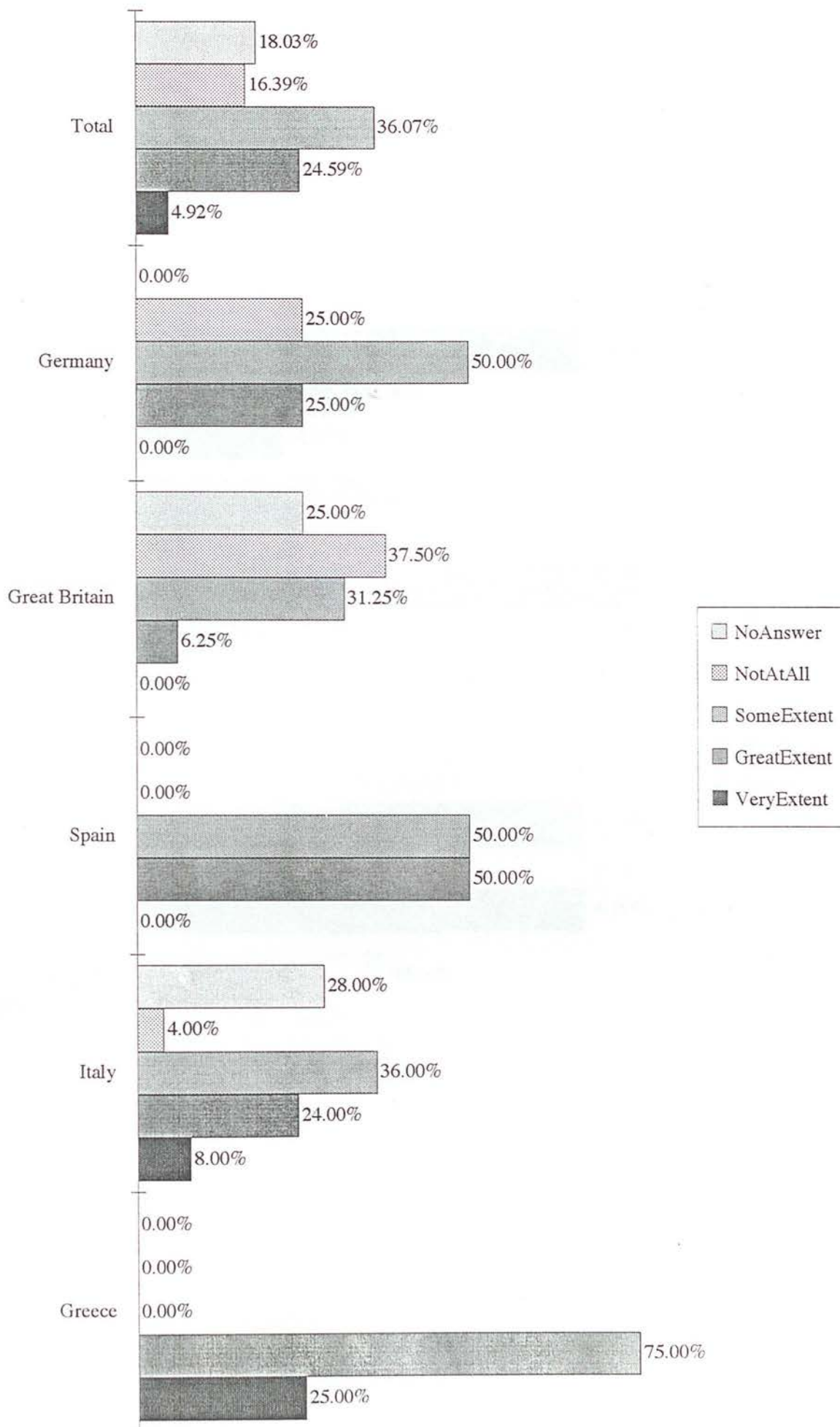


Chart.5.4

Politics Influencing Production



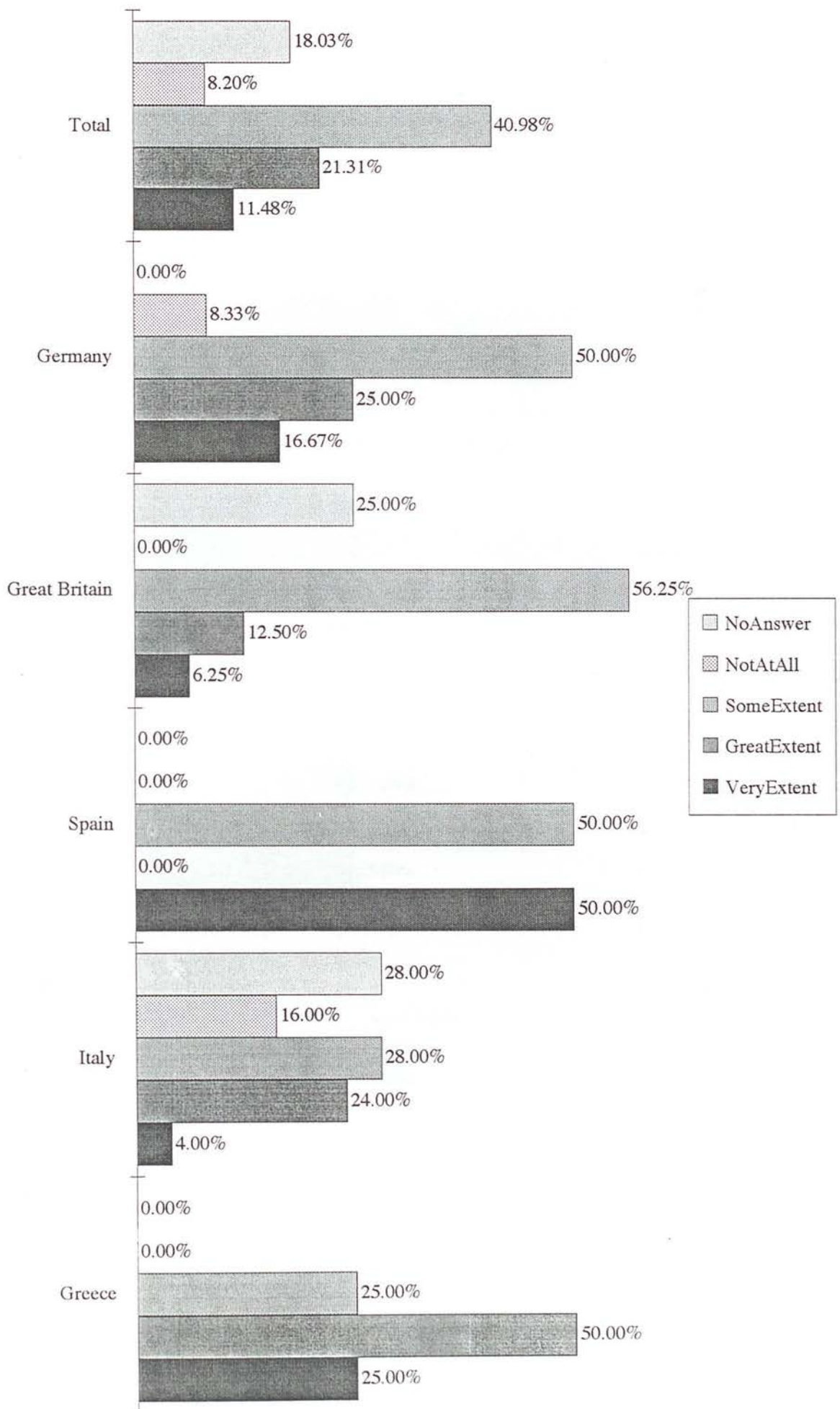


Chart.5.5 Government Policy Concerning Manufacturers Influences Production

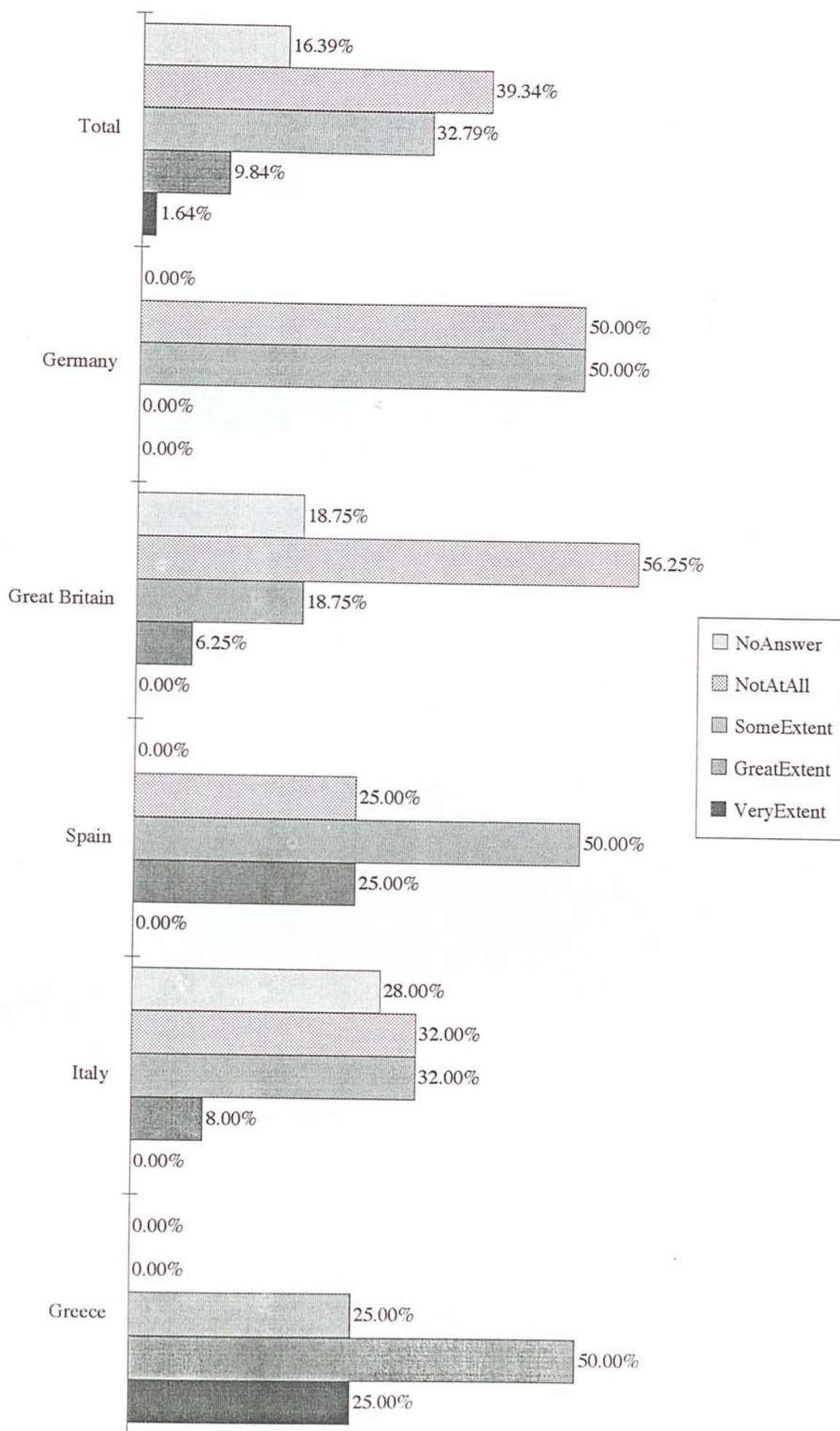


Chart.5.6 Government Policy Concerning Middle Class Income Influences Production



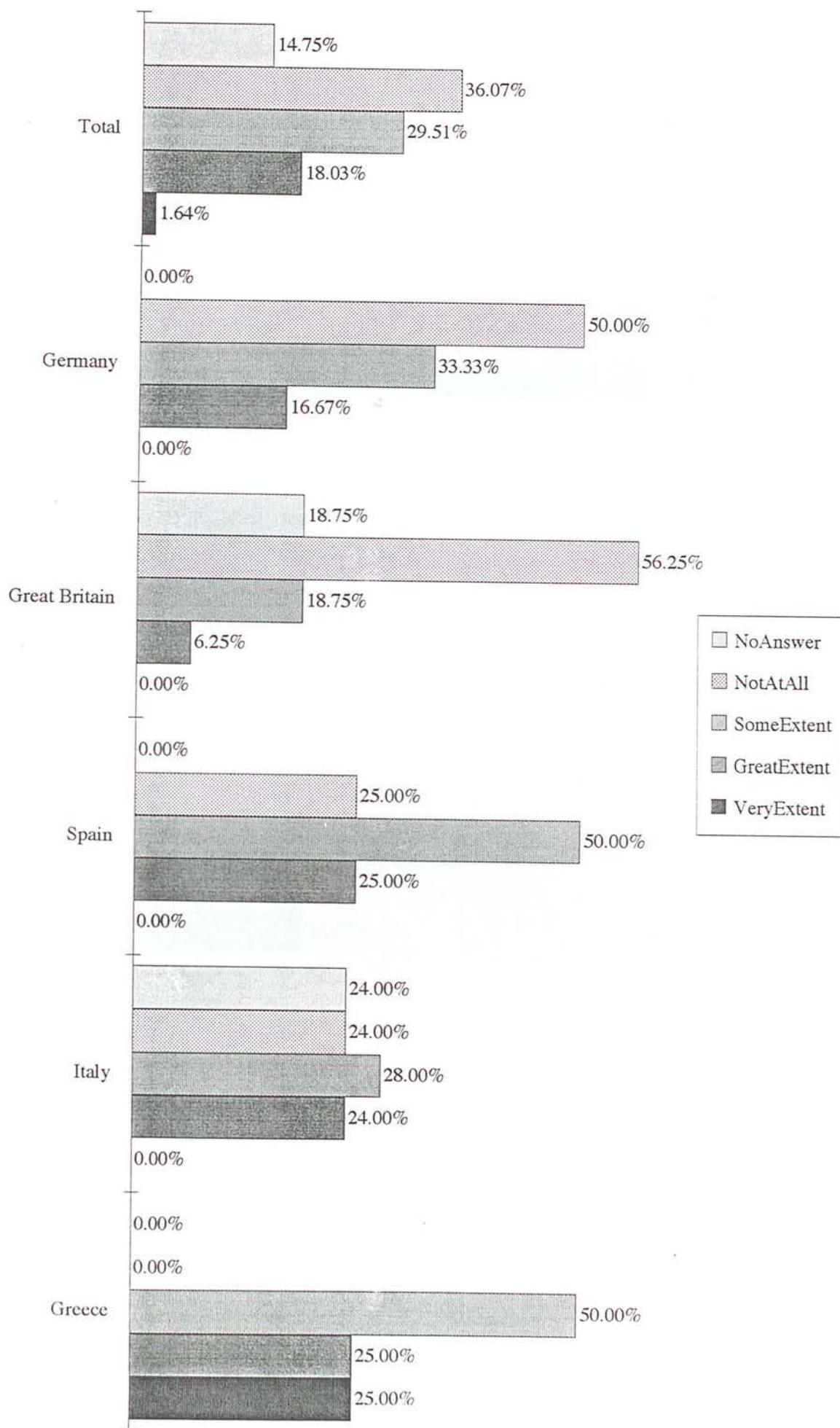


Chart.5.7 Government Policy Concerning Upper Class Income Influences Production

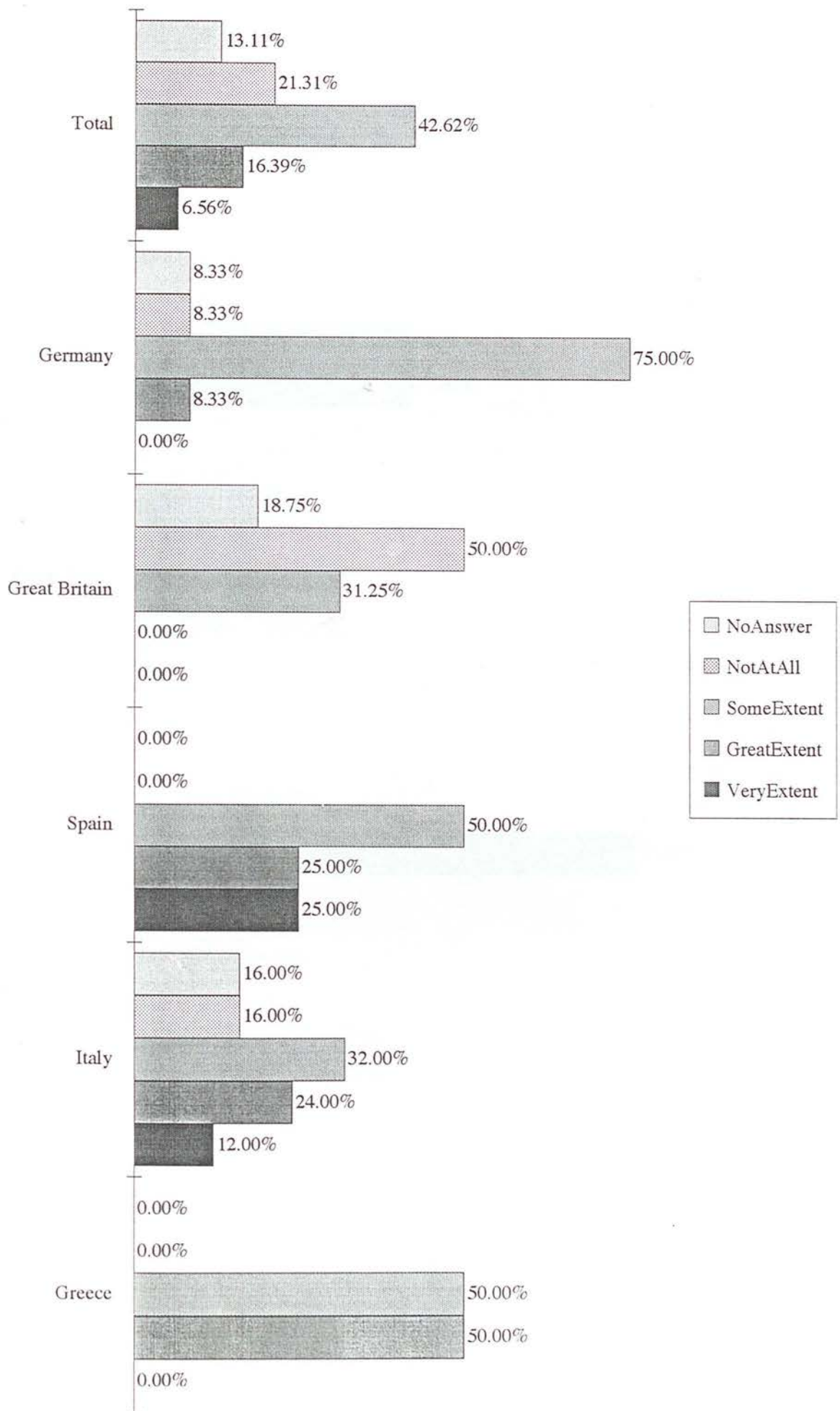


Chart.5.8

Mass Media Influencing Production



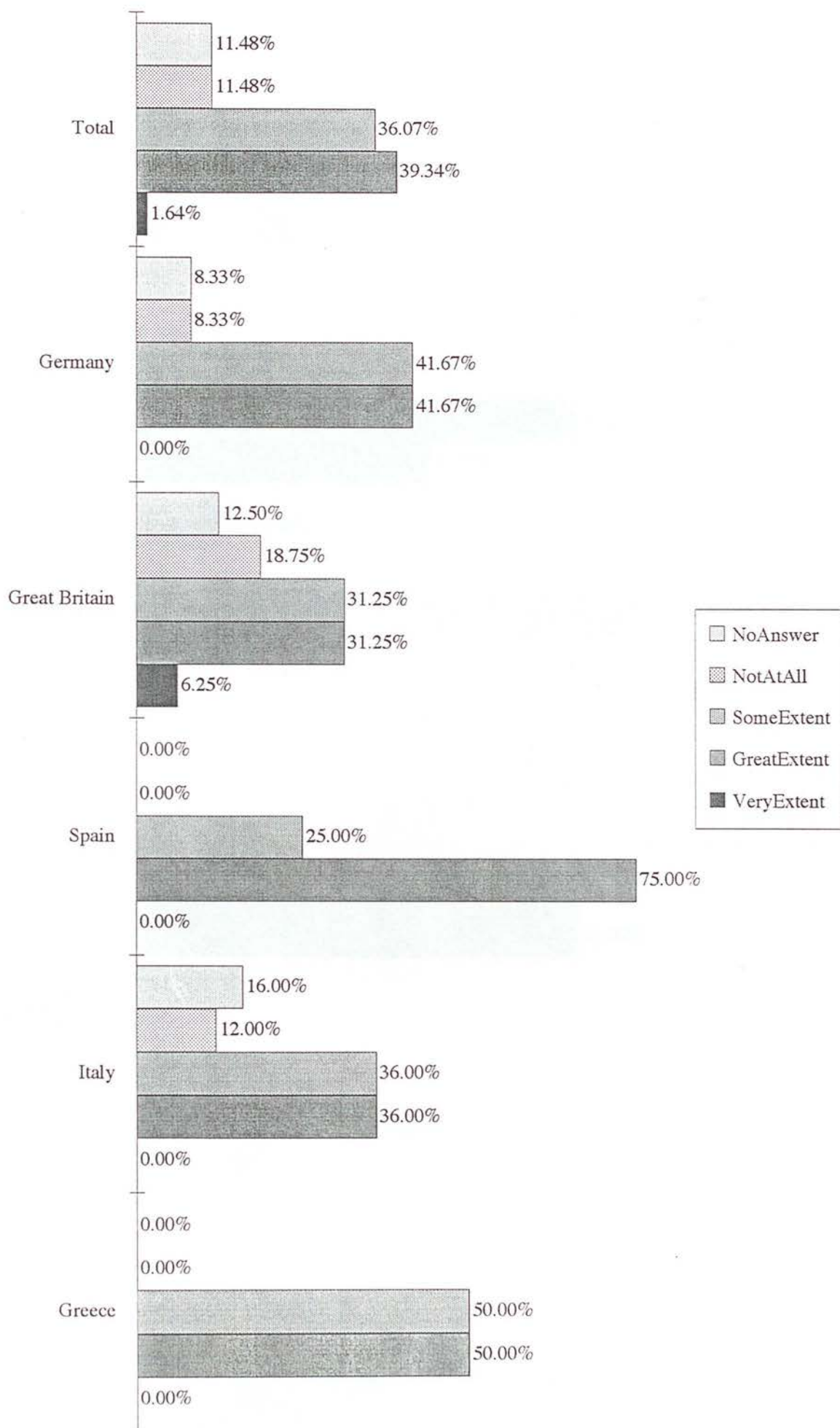


Chart.5.9

Other Countries' Production Influencing Production

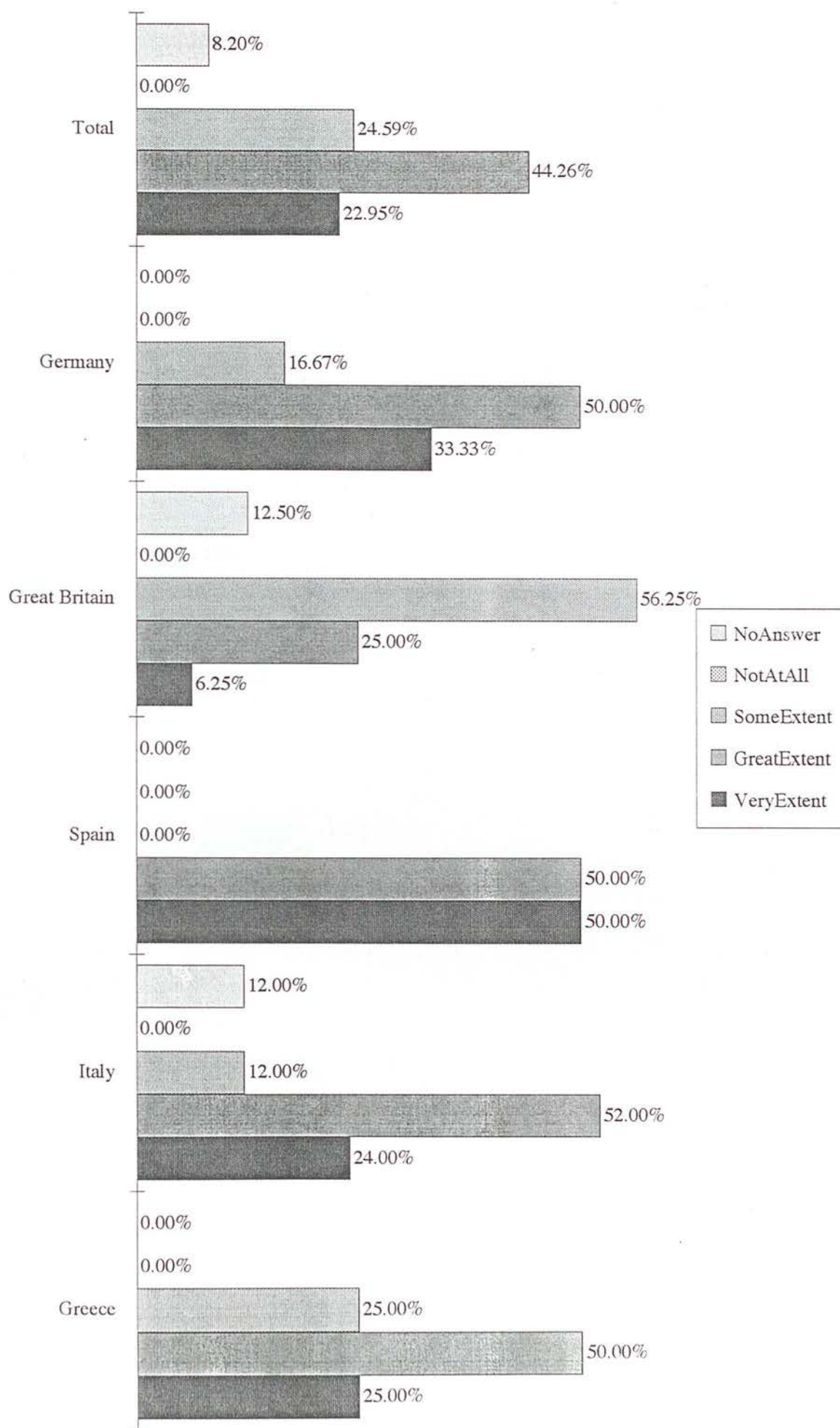


Chart.5.10

Technological Evolution Influencing Production



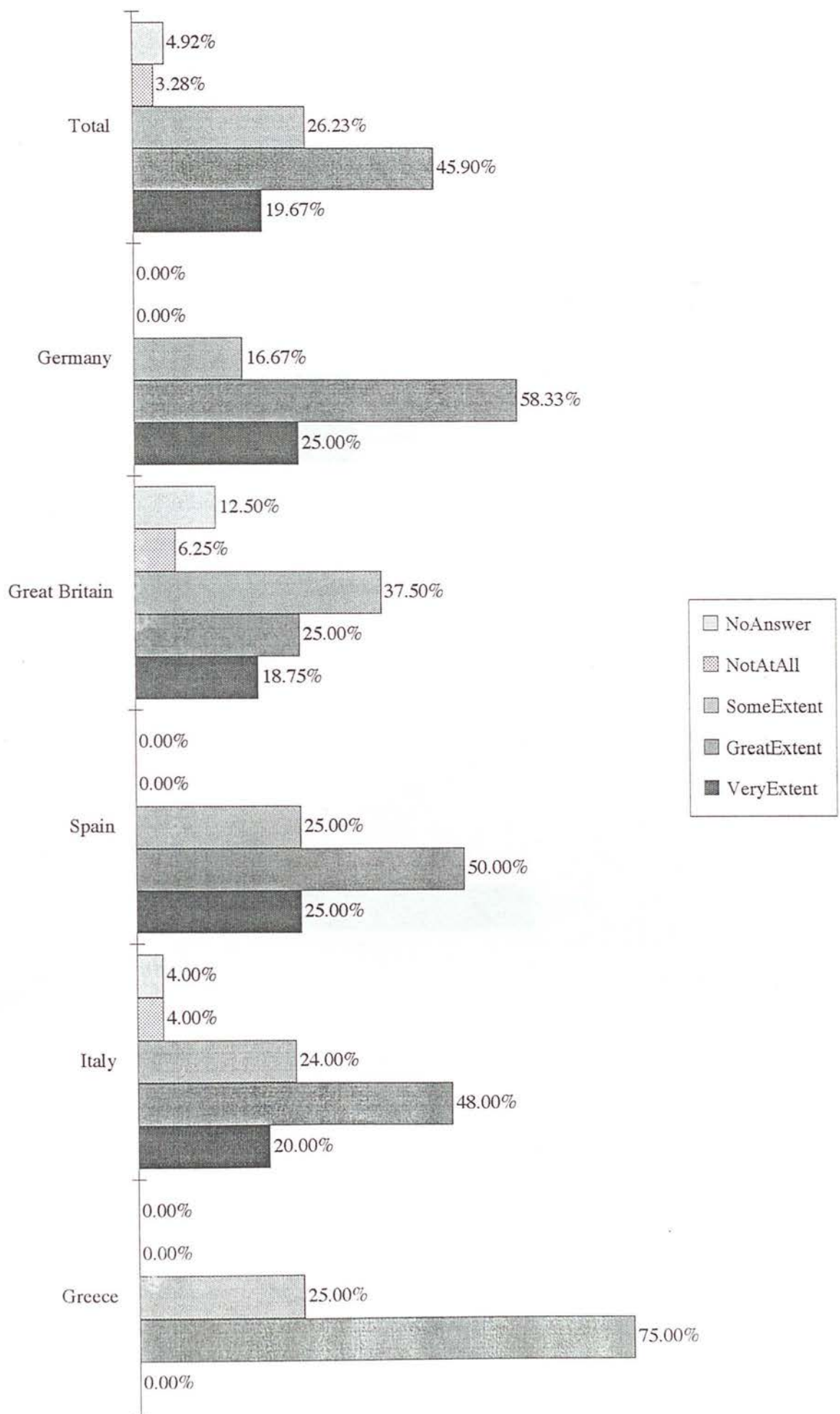


Chart.5.11

Architectural Tendencies Influencing Production

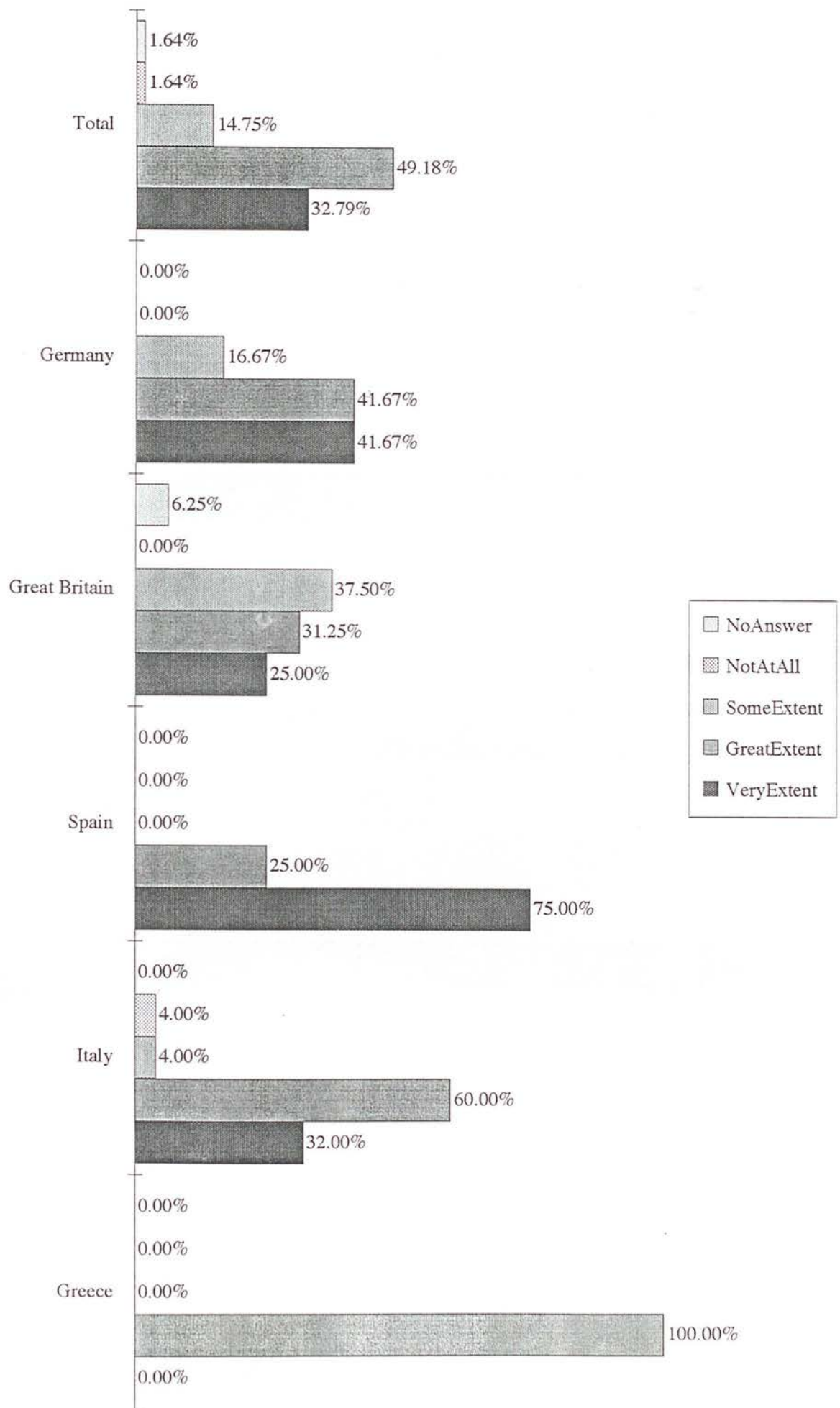


Chart.5.12

Design Tendencies Influencing Production



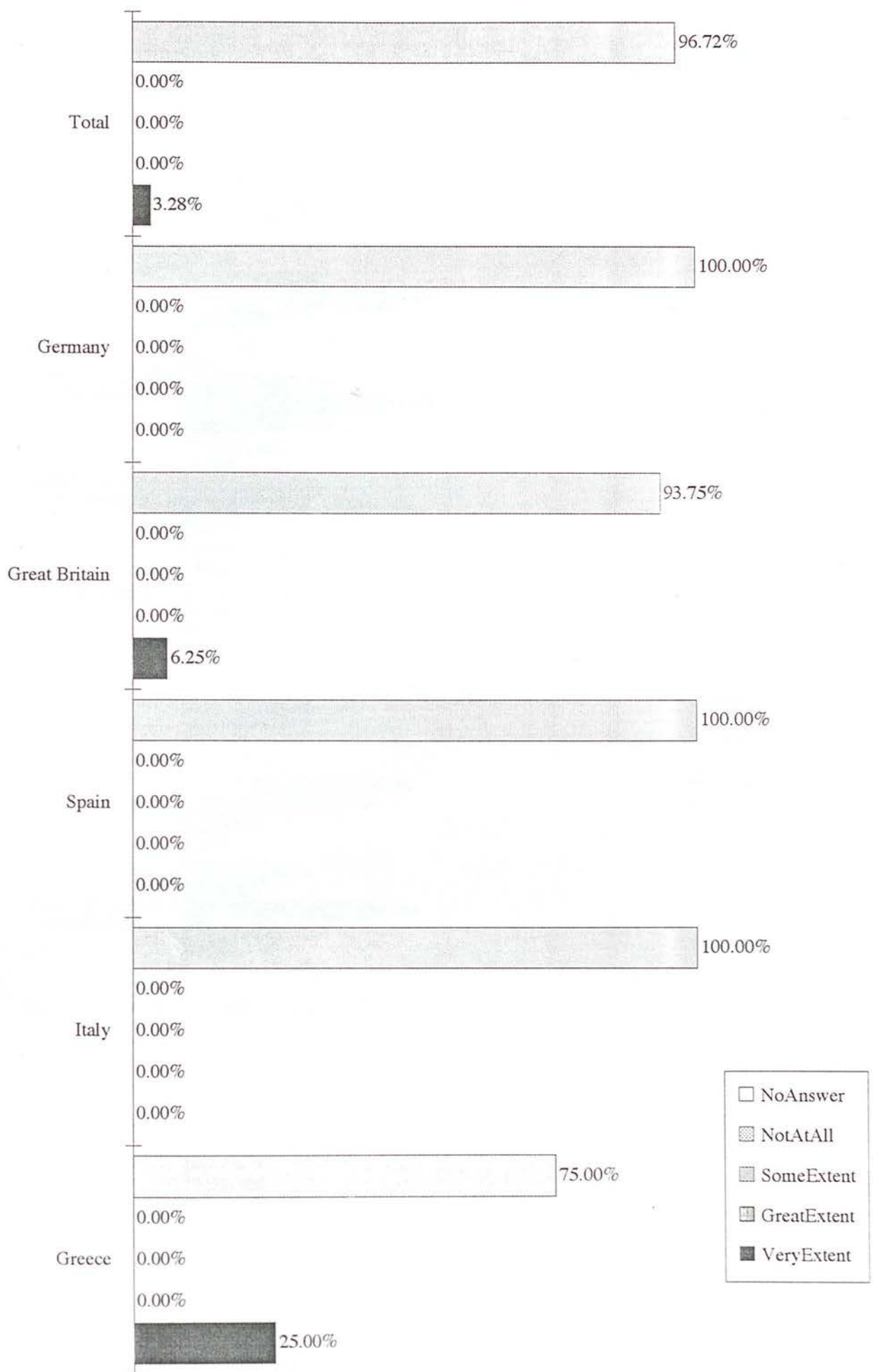


Chart.5.13

Other Factors Influencing Production<sup>x</sup>

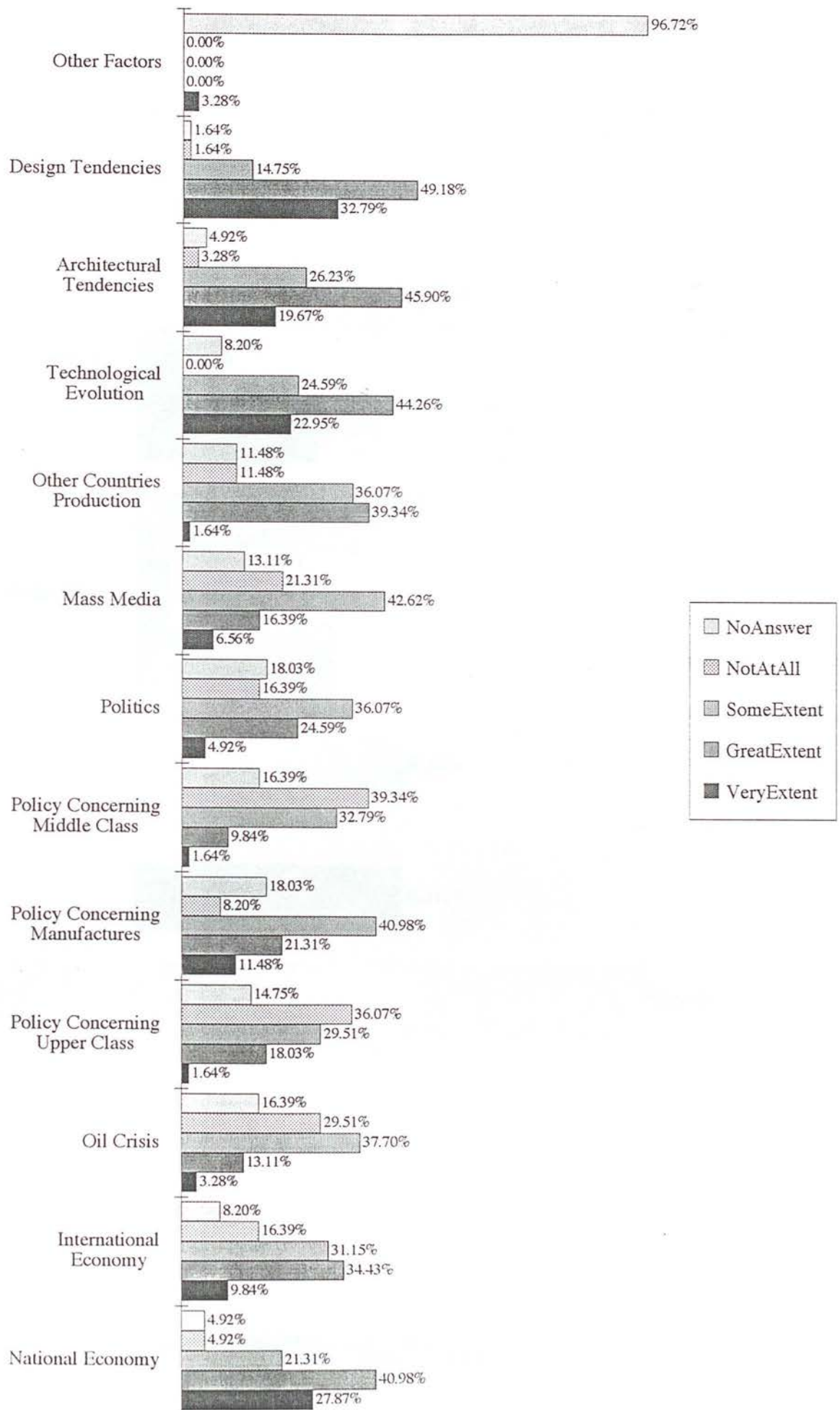


Chart.5.14

Factors Influencing Production



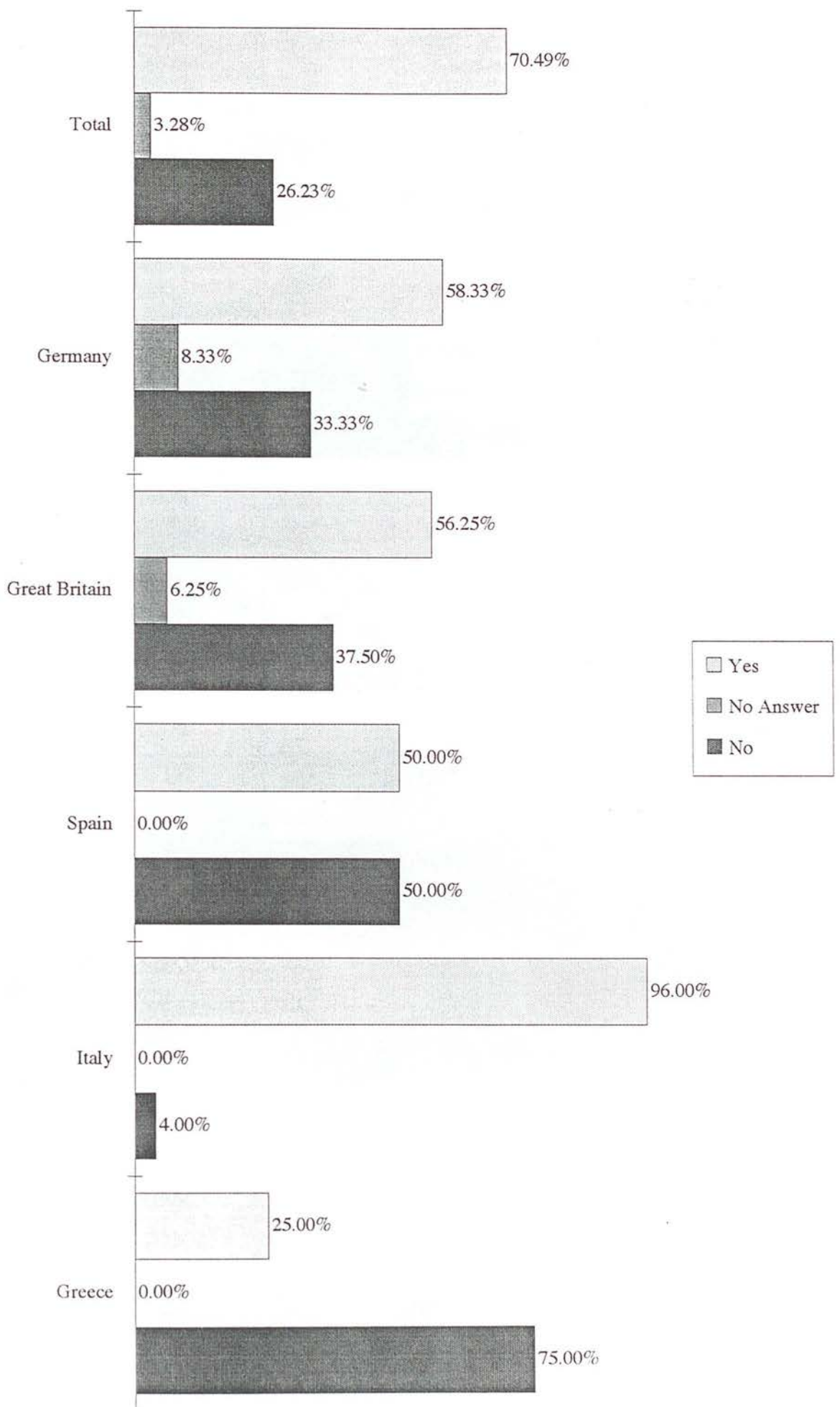


Chart.6.1 Relationship between Tradition in Furniture and Company's Production (General)

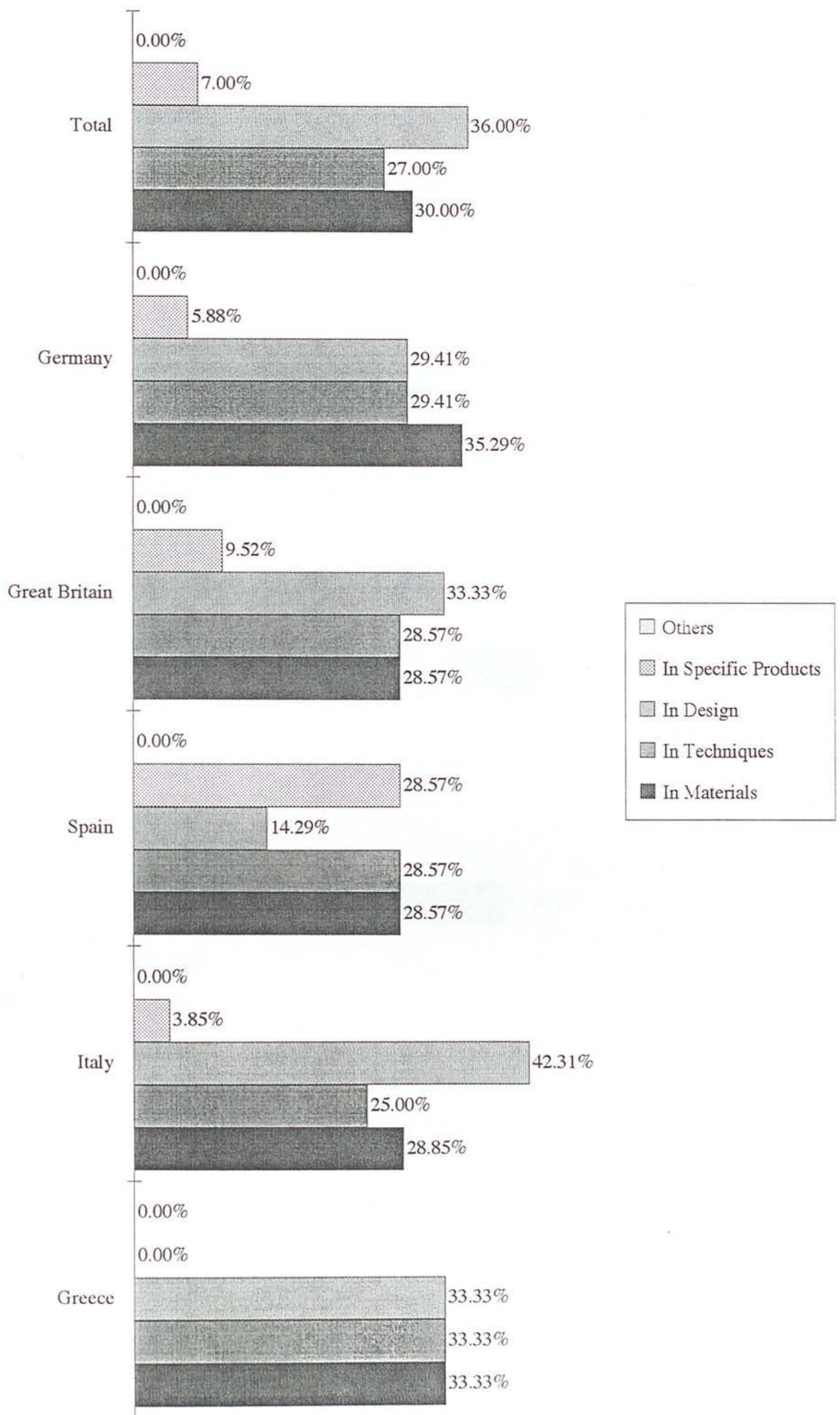


Chart.6.2 Relationship between Tradition in Furniture and Company's Production (Relations)



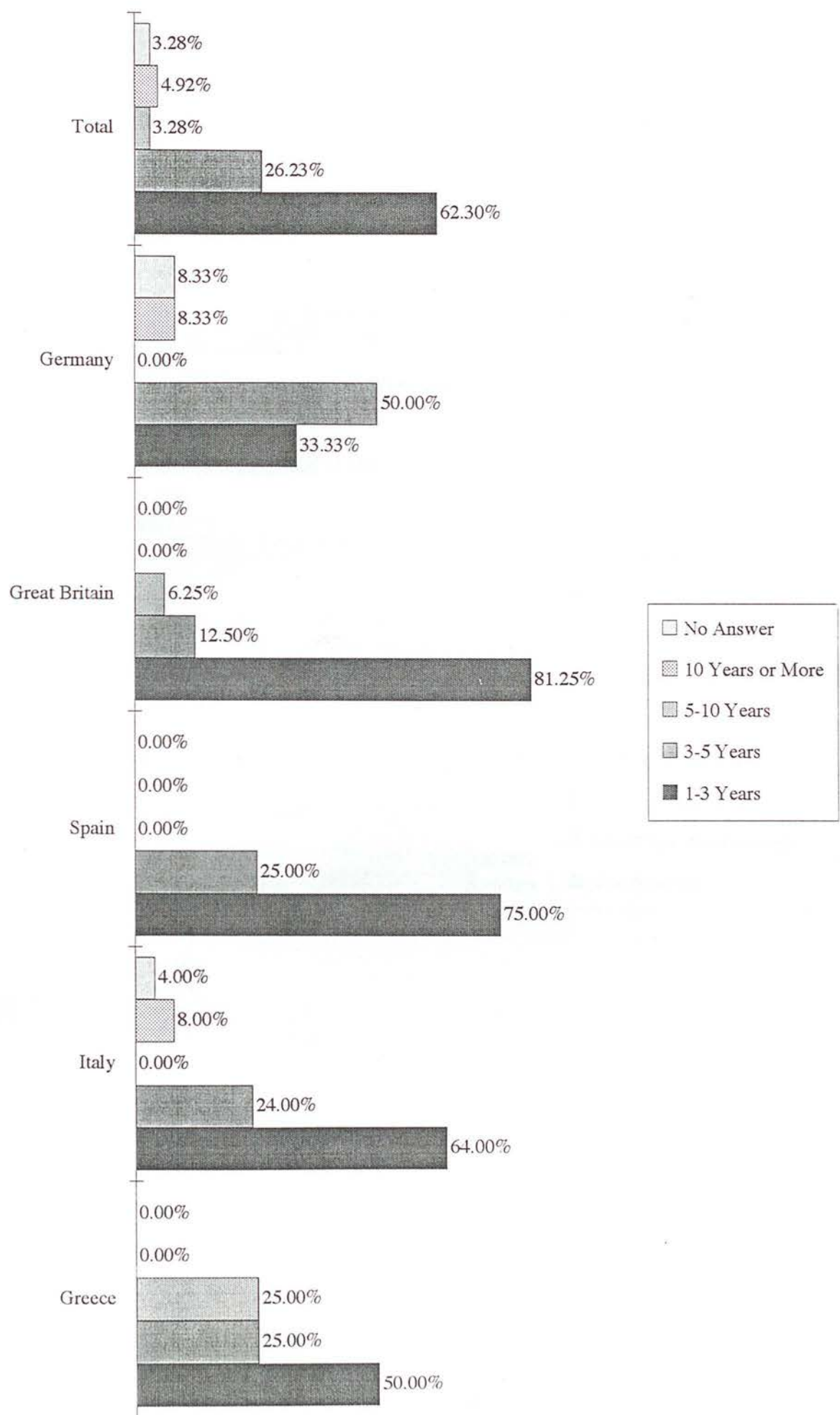


Chart.7

Time - Plan of Production

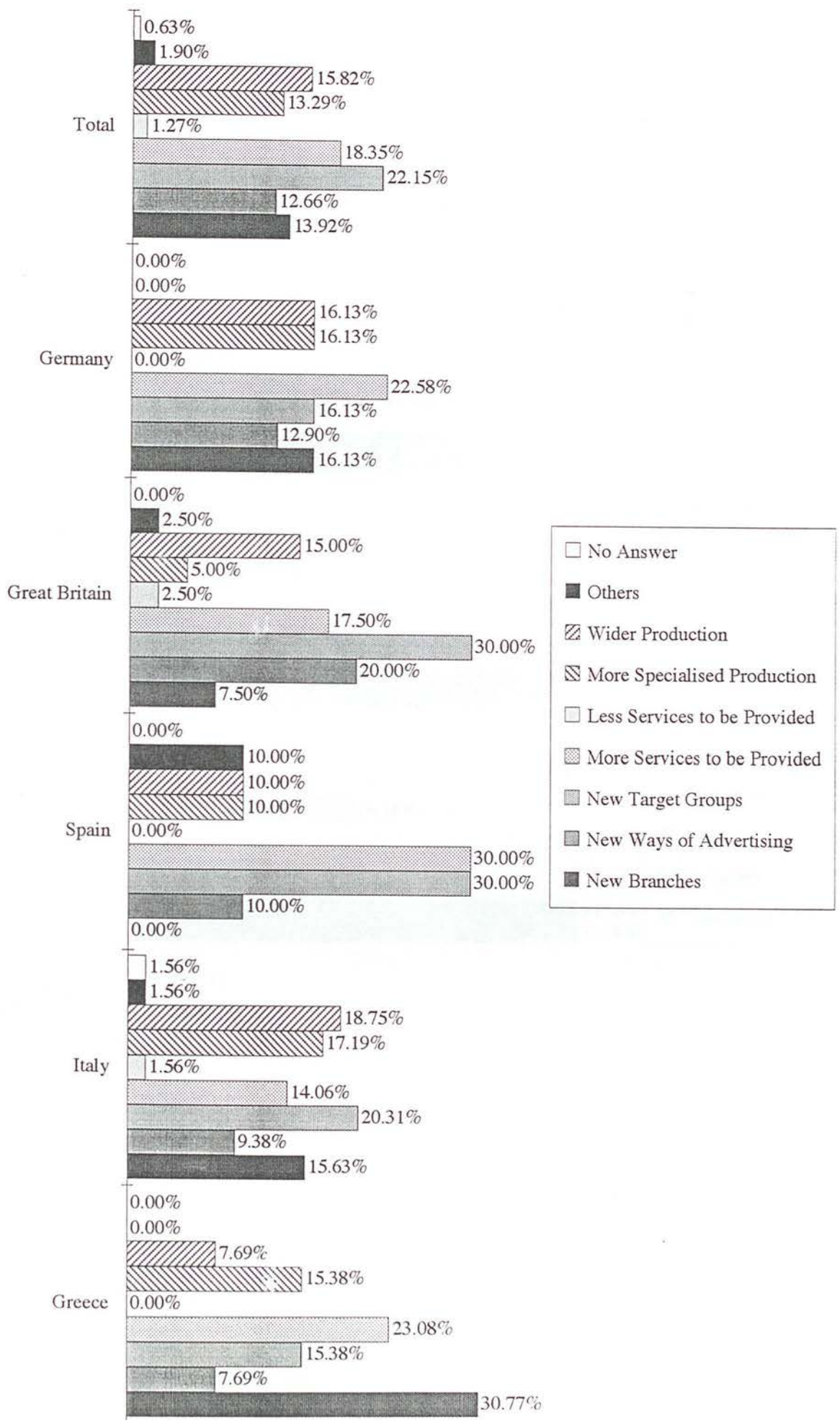


Chart.8

Aims and Plans for the 90's Market

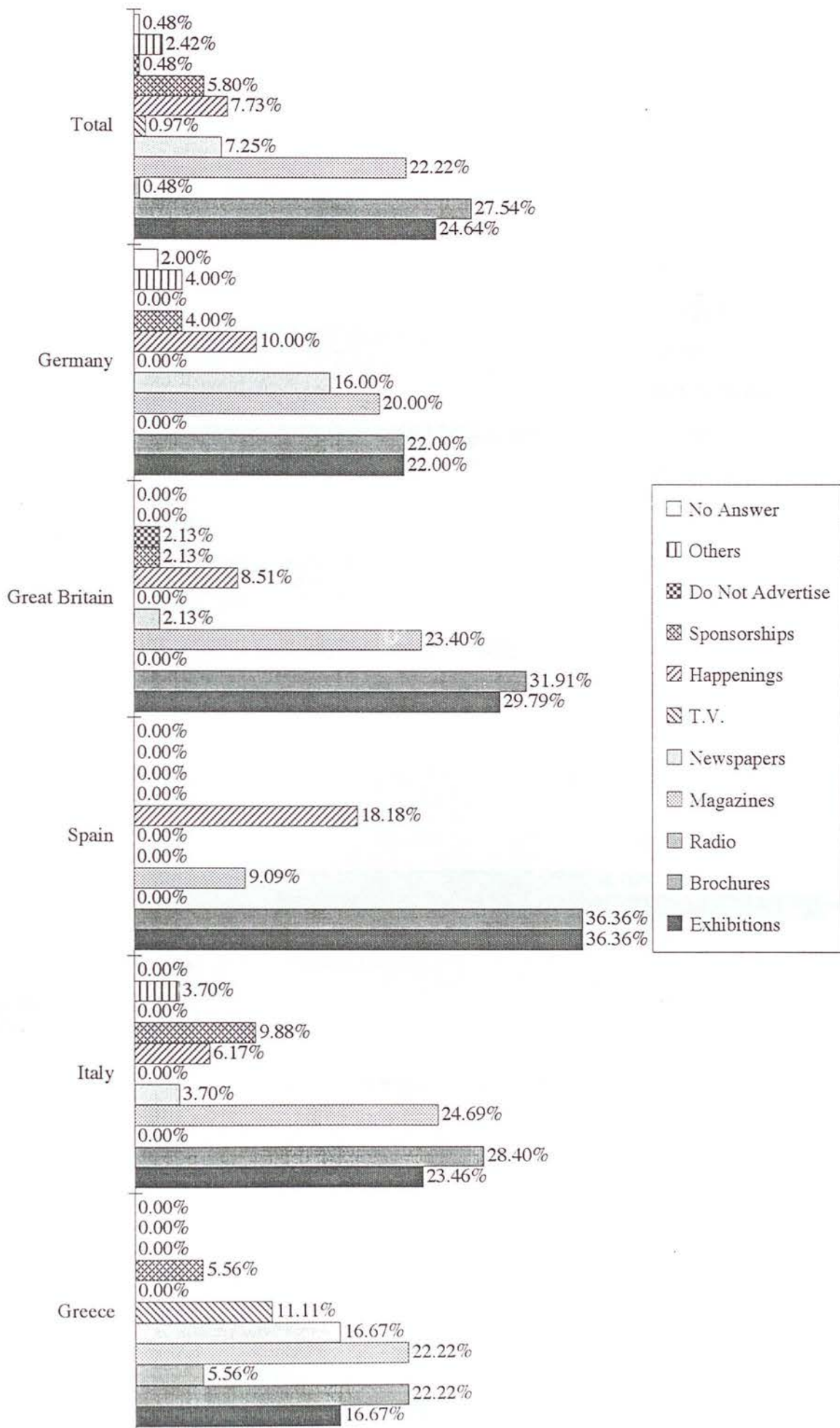


Chart.9

Ways of Advertising



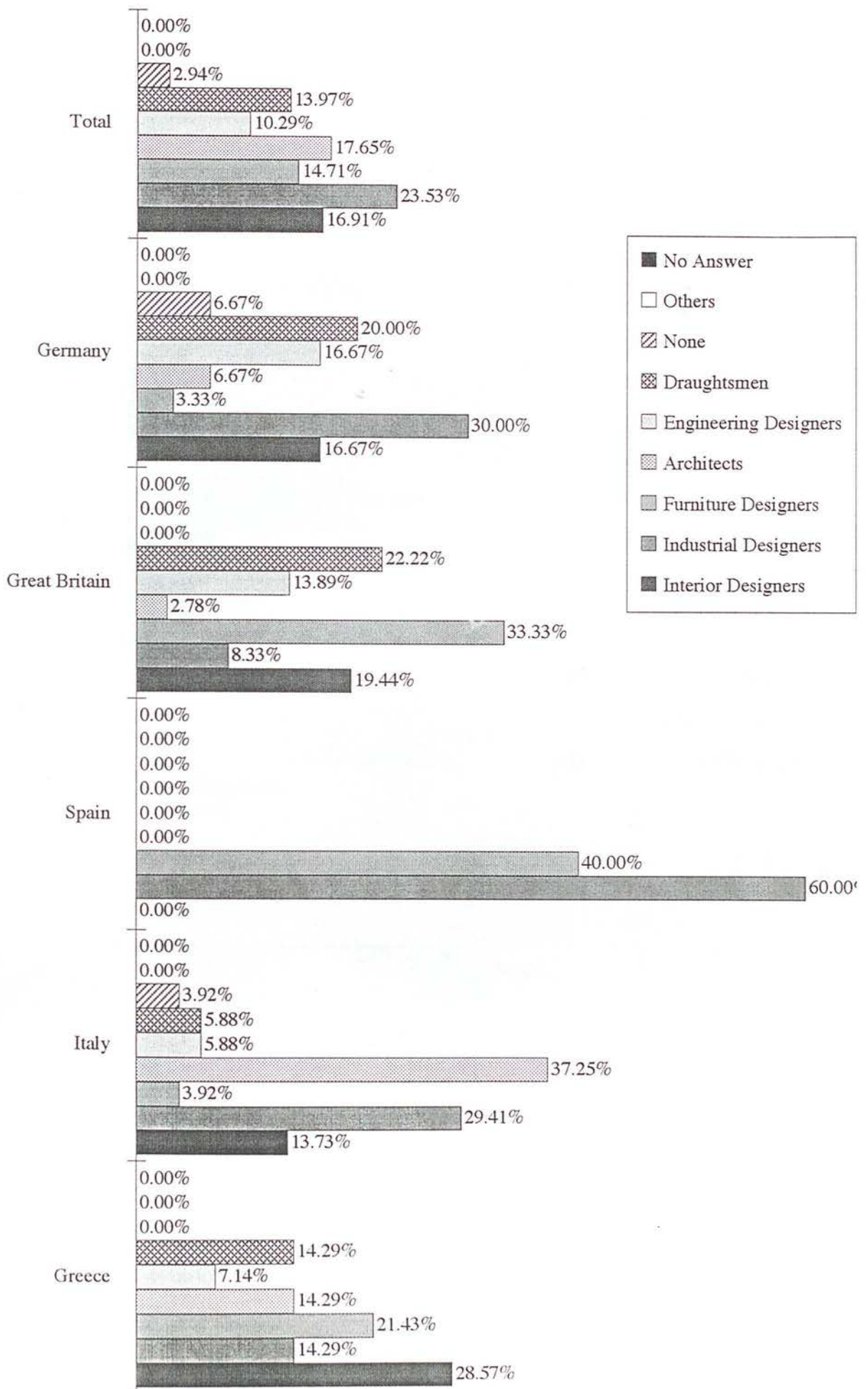


Chart.10

Categories of Designers employed by the company

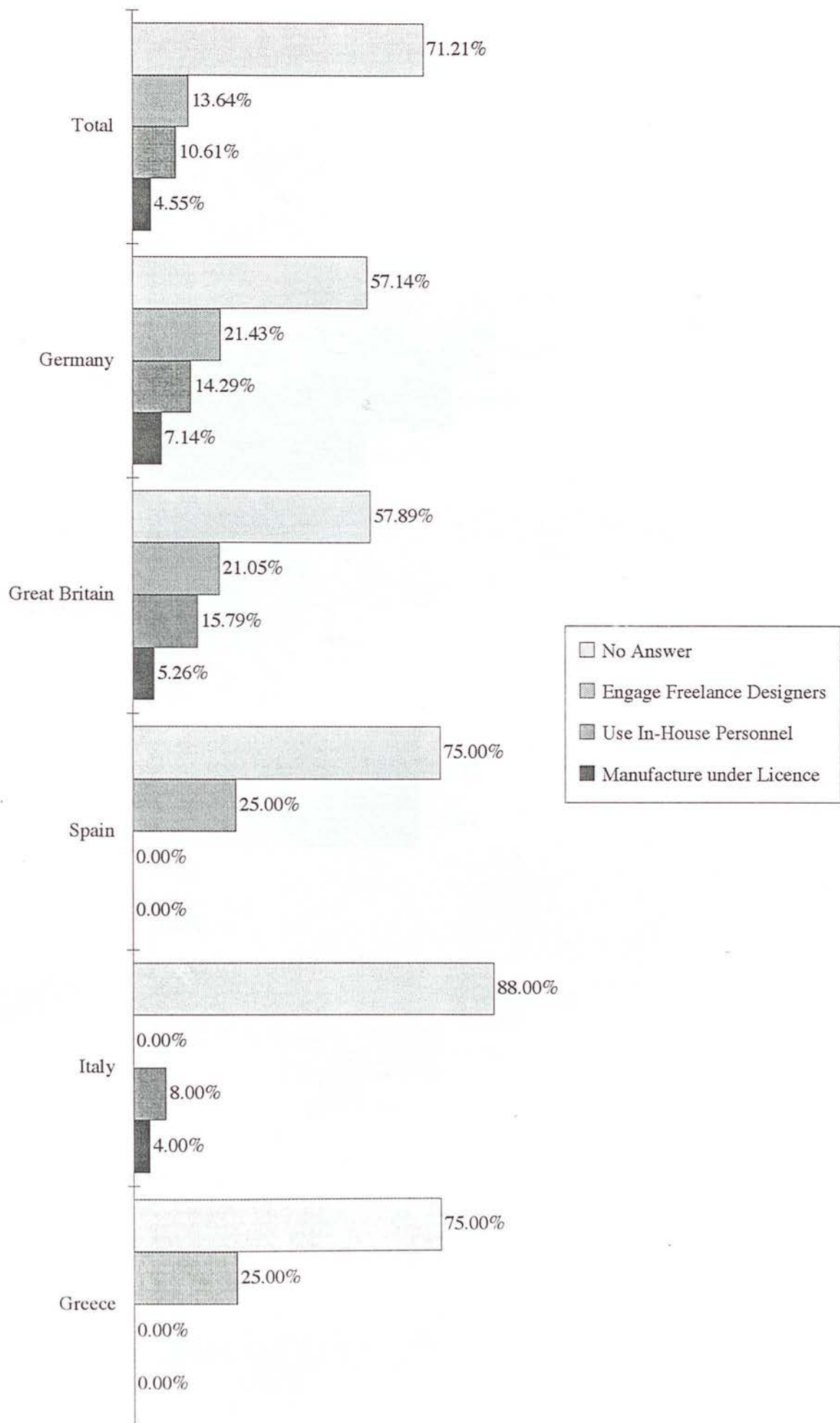


Chart.11

Design methods in case that the company does not employ designers

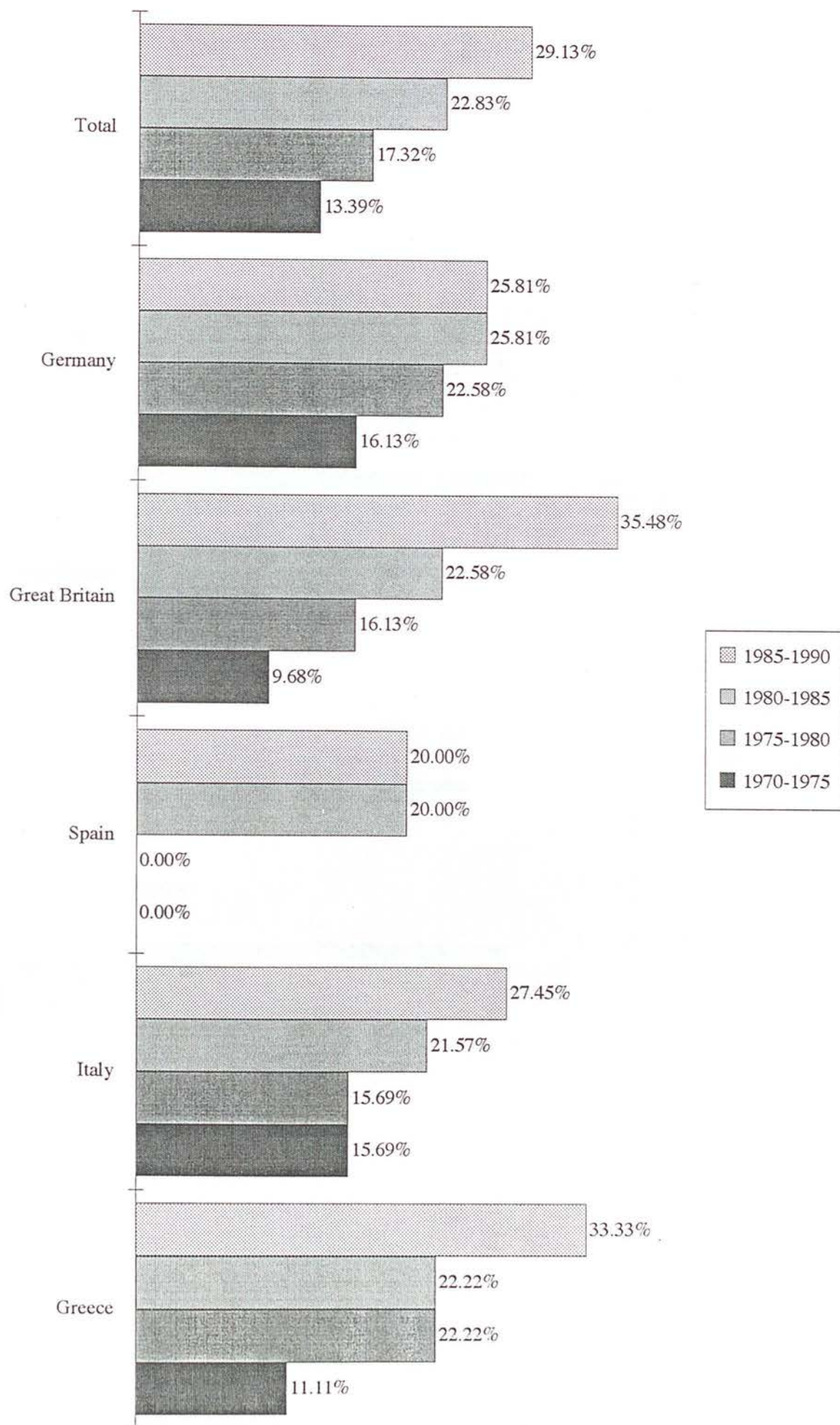


Chart.13.1

Luxury reflected in the Form of Products



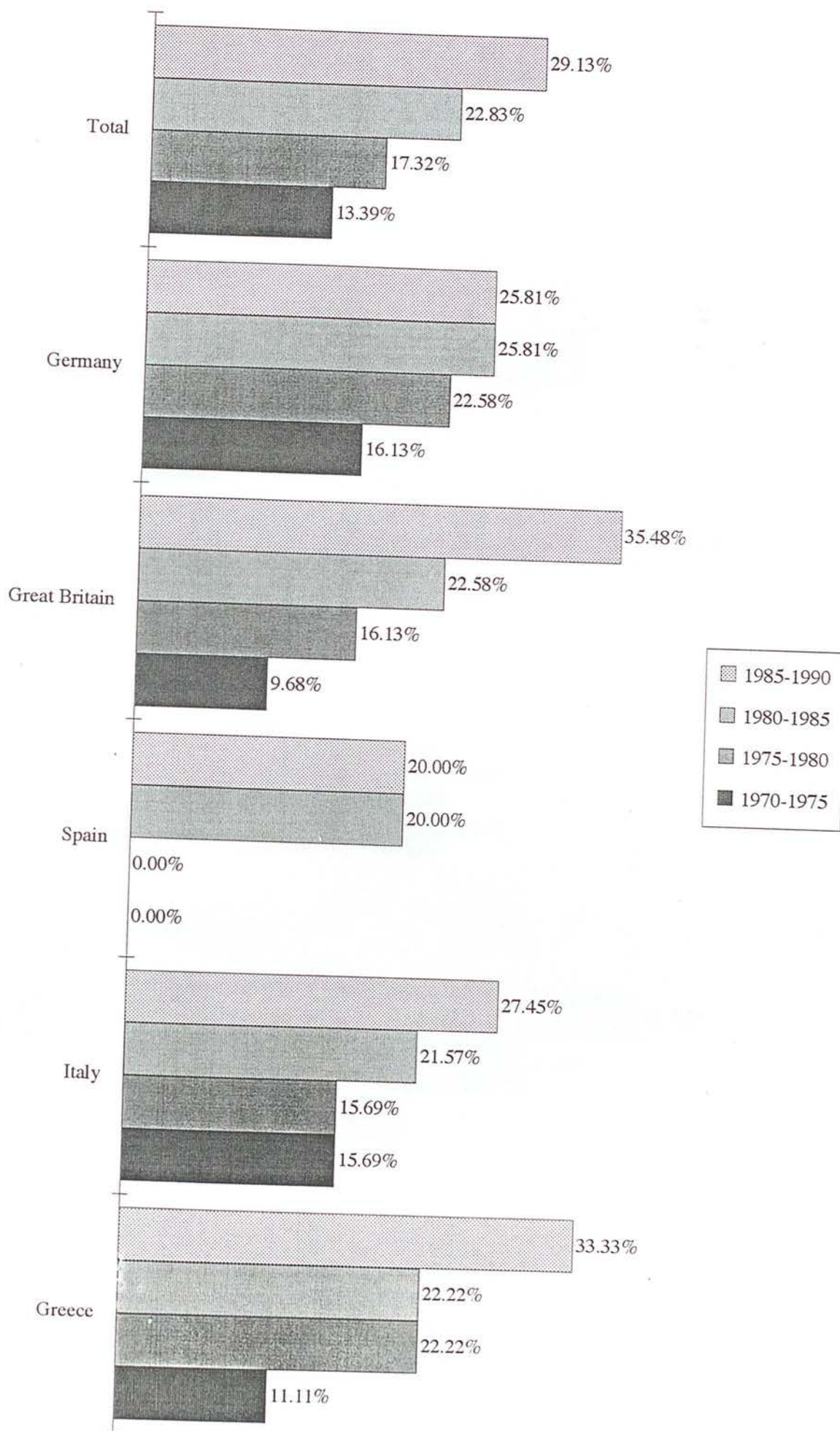


Chart.13.2

Comfort reflected in the Form of Products

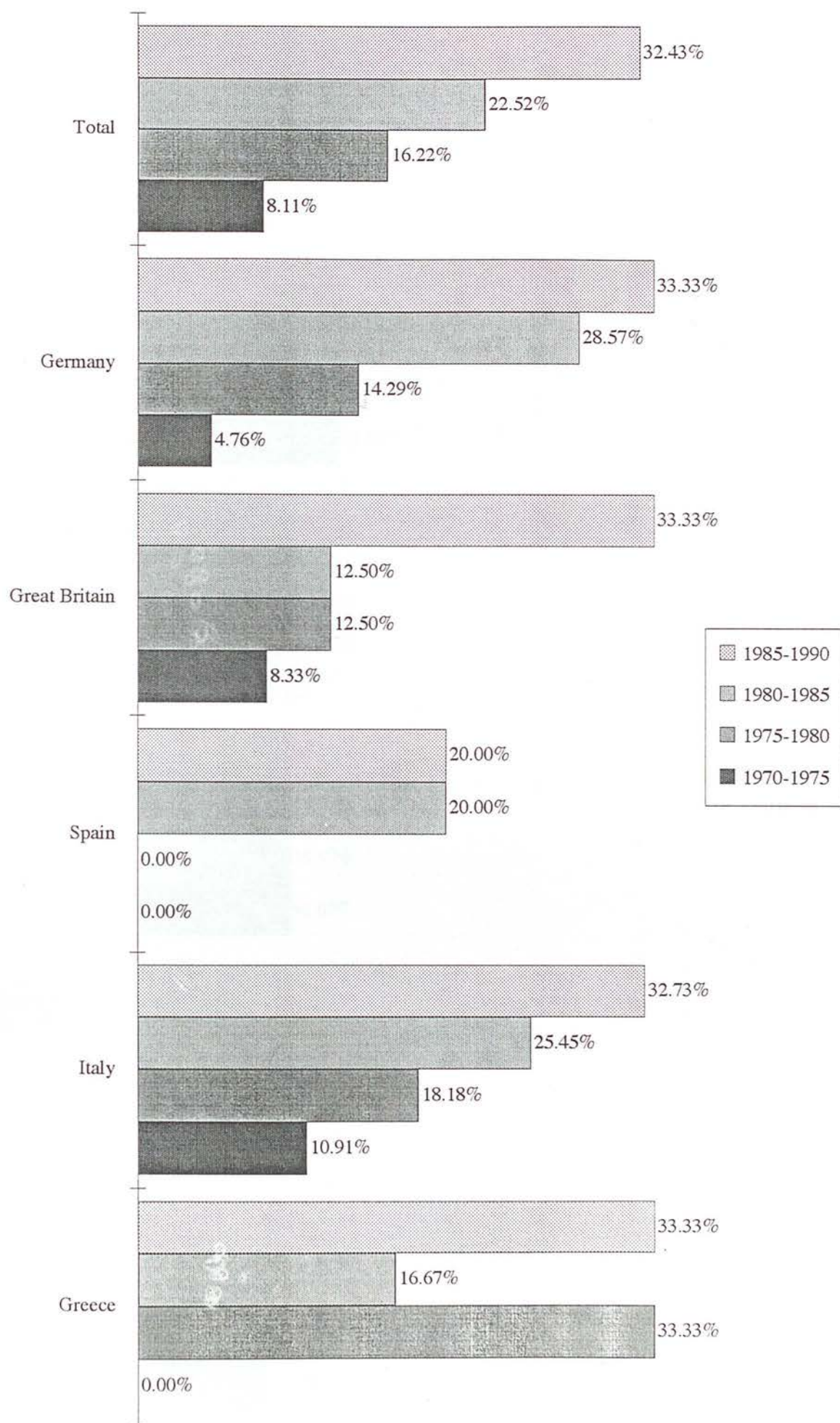


Chart.13.3

Status reflected in the Form of Products



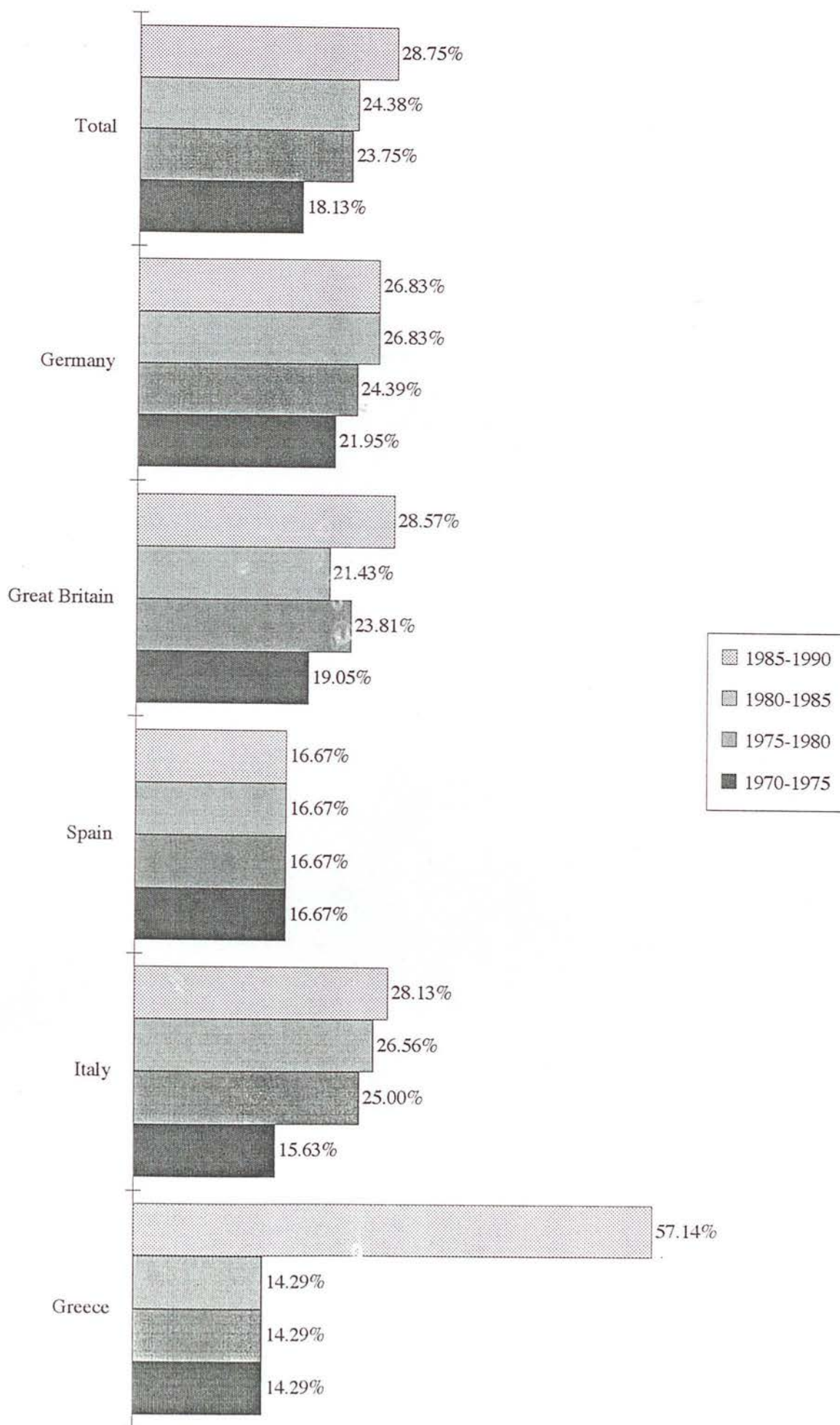


Chart.13.4

Durability reflected in the Form of Products



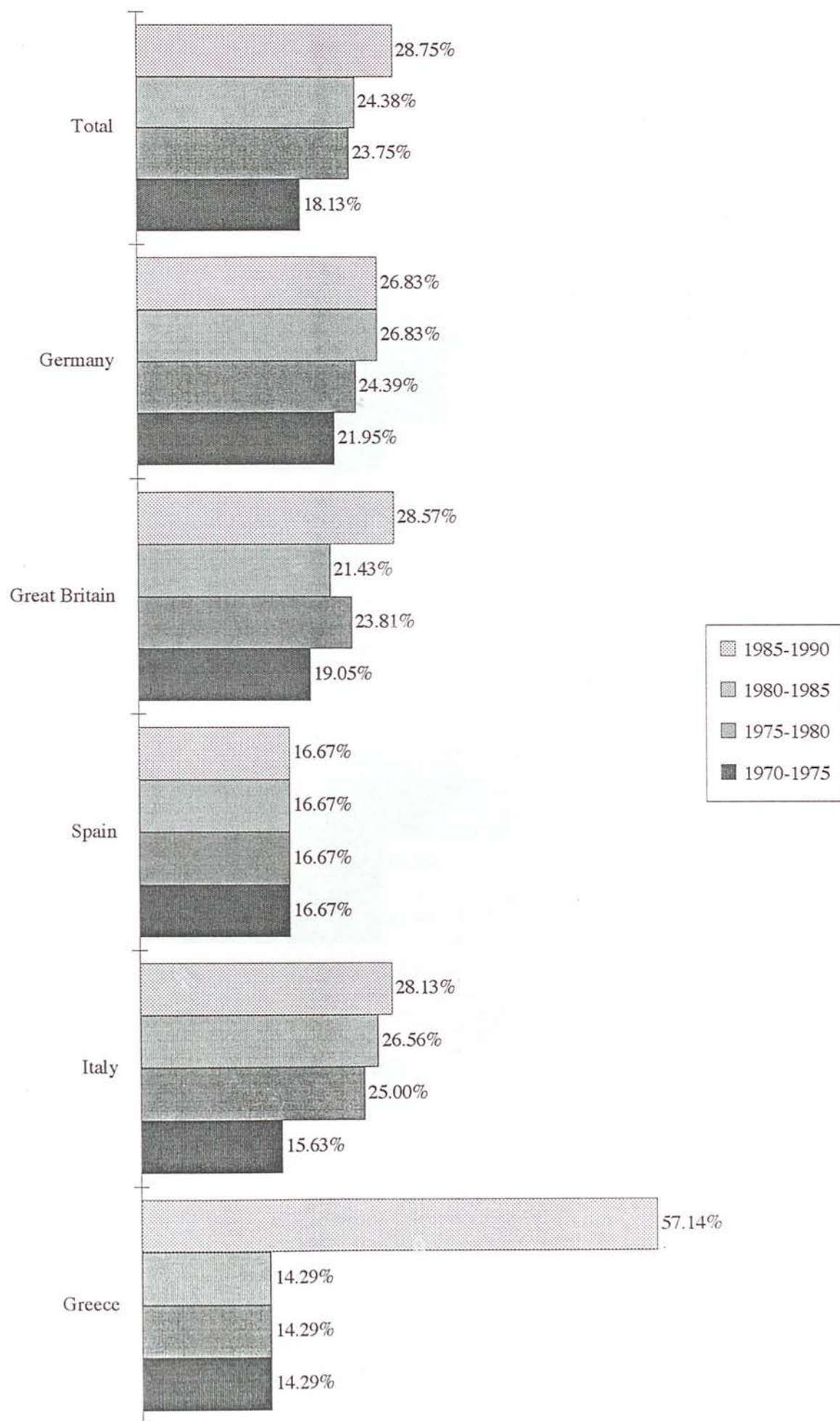


Chart.13.4

Durability reflected in the Form of Products

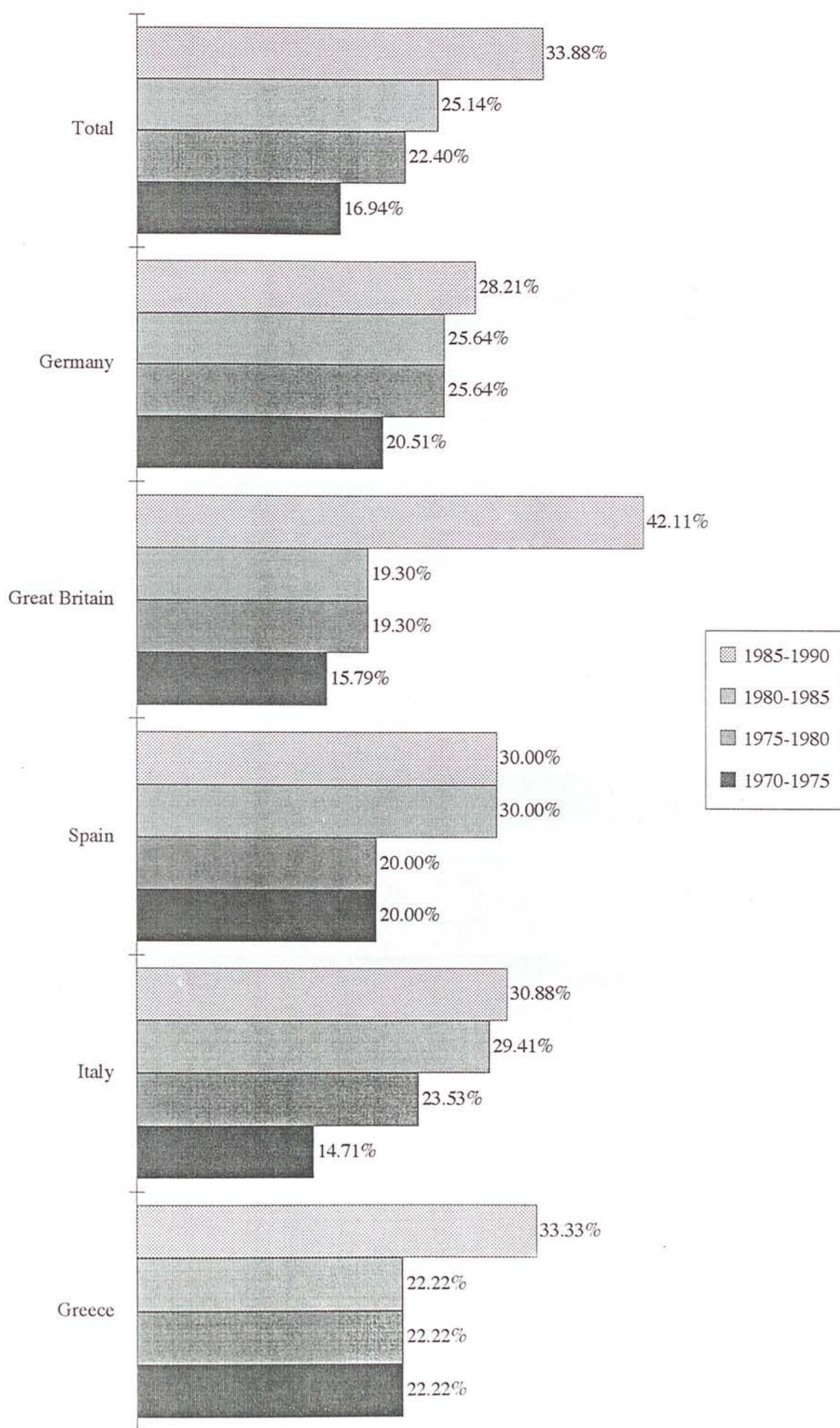


Chart.13.5

Functionality reflected in the Form of Products



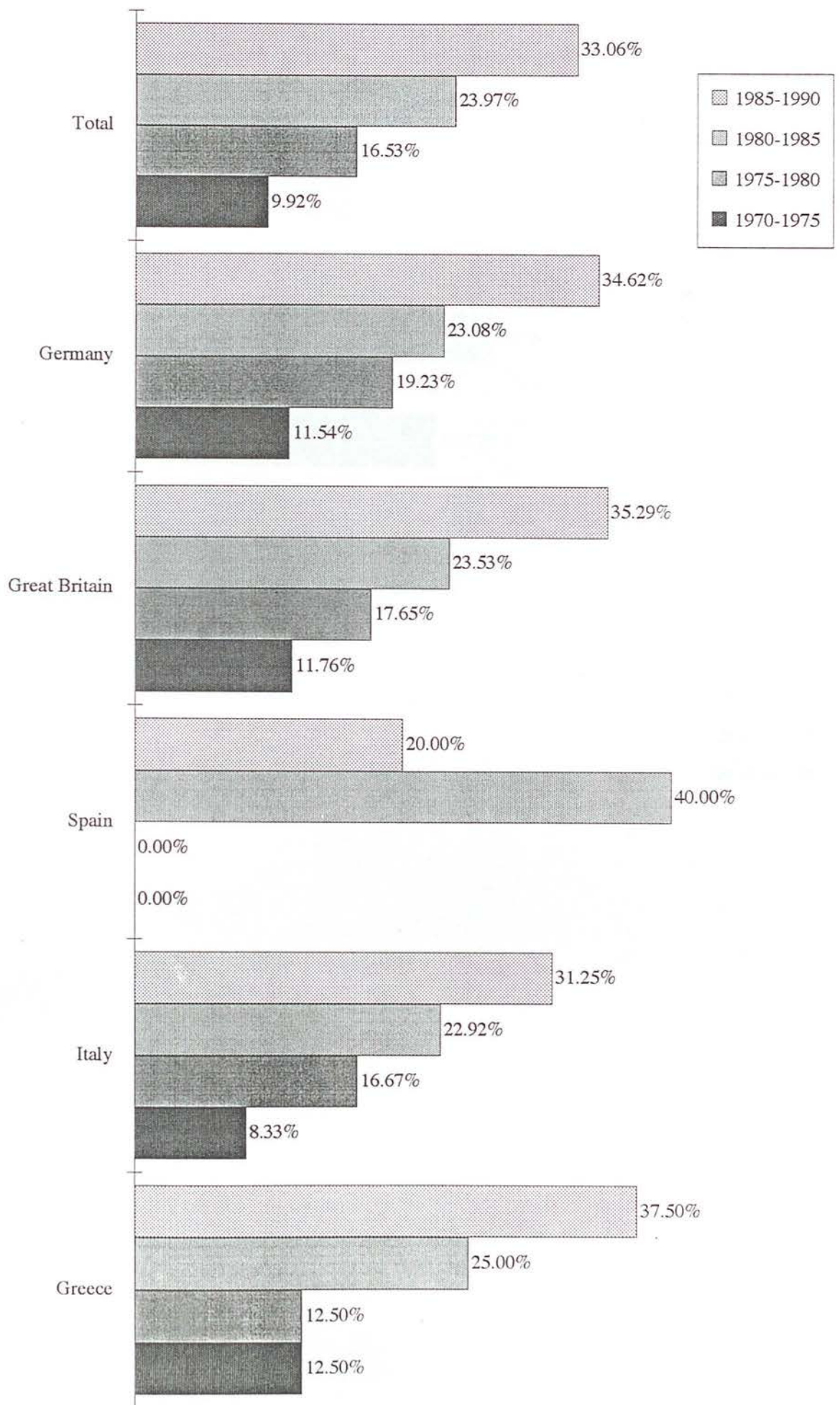


Chart.13.6

Flexibility reflected in the Form of Products



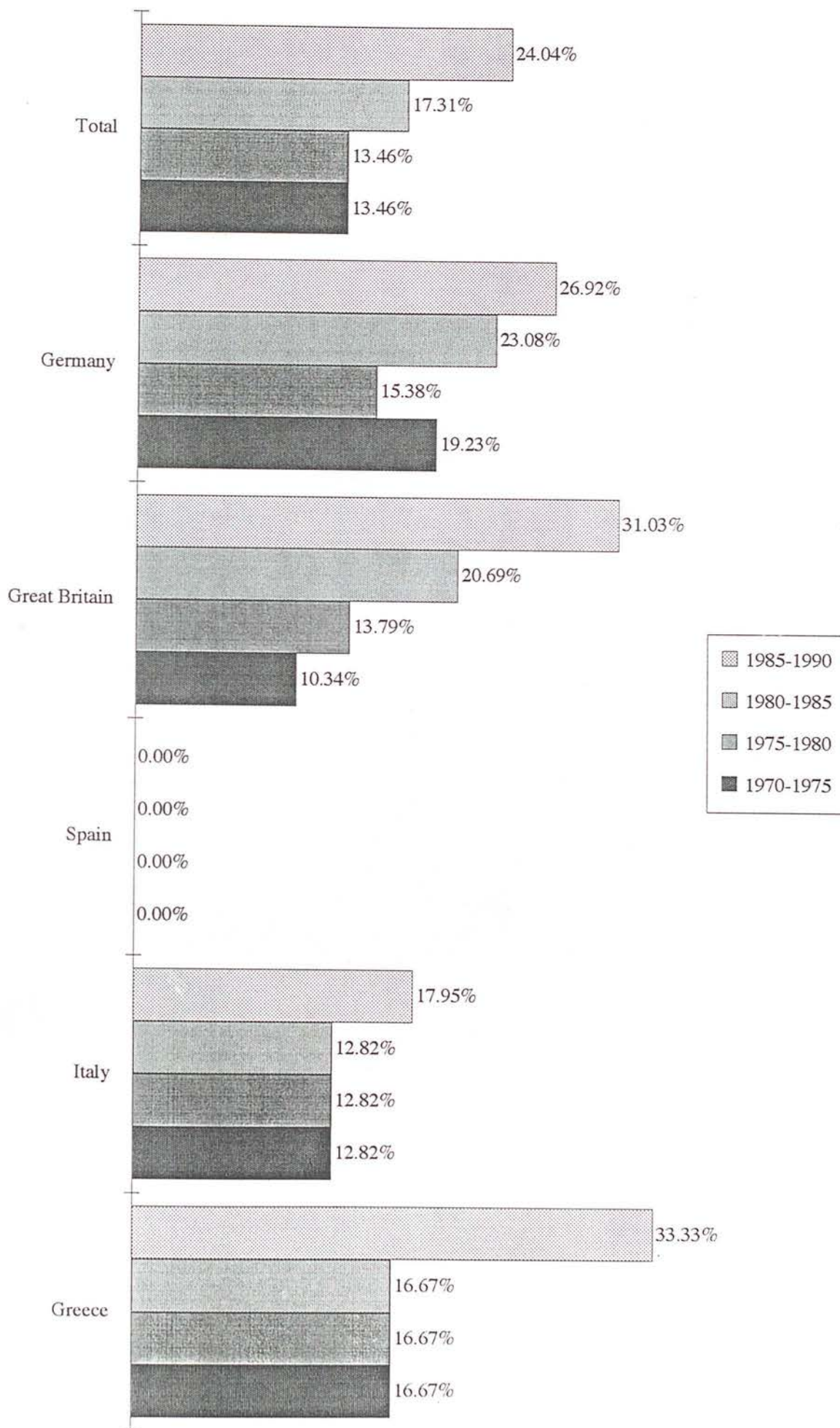


Chart.13.7

Individuality reflected in the Form of Products

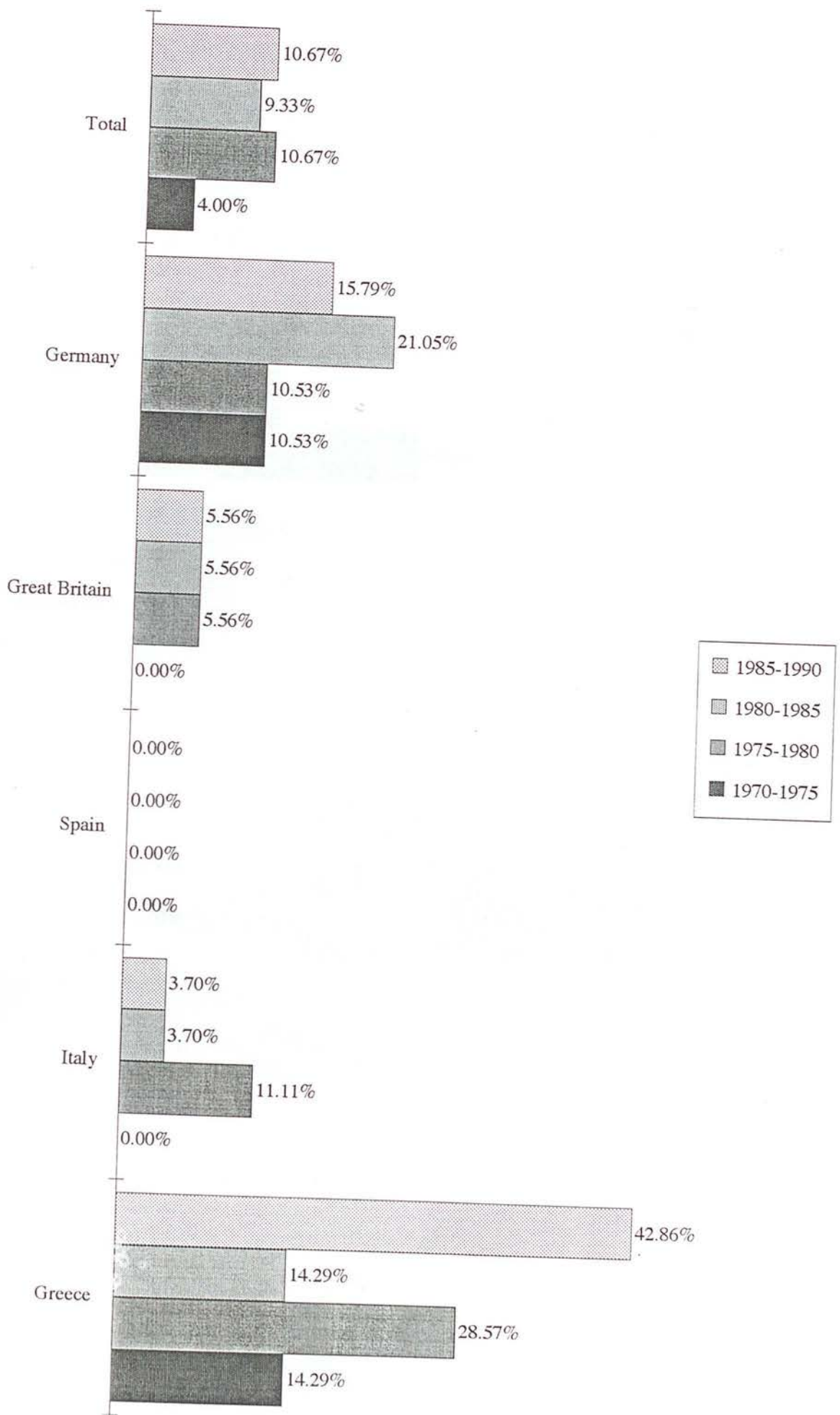


Chart.13.8

Informality - Relaxation reflected in the Form of Products

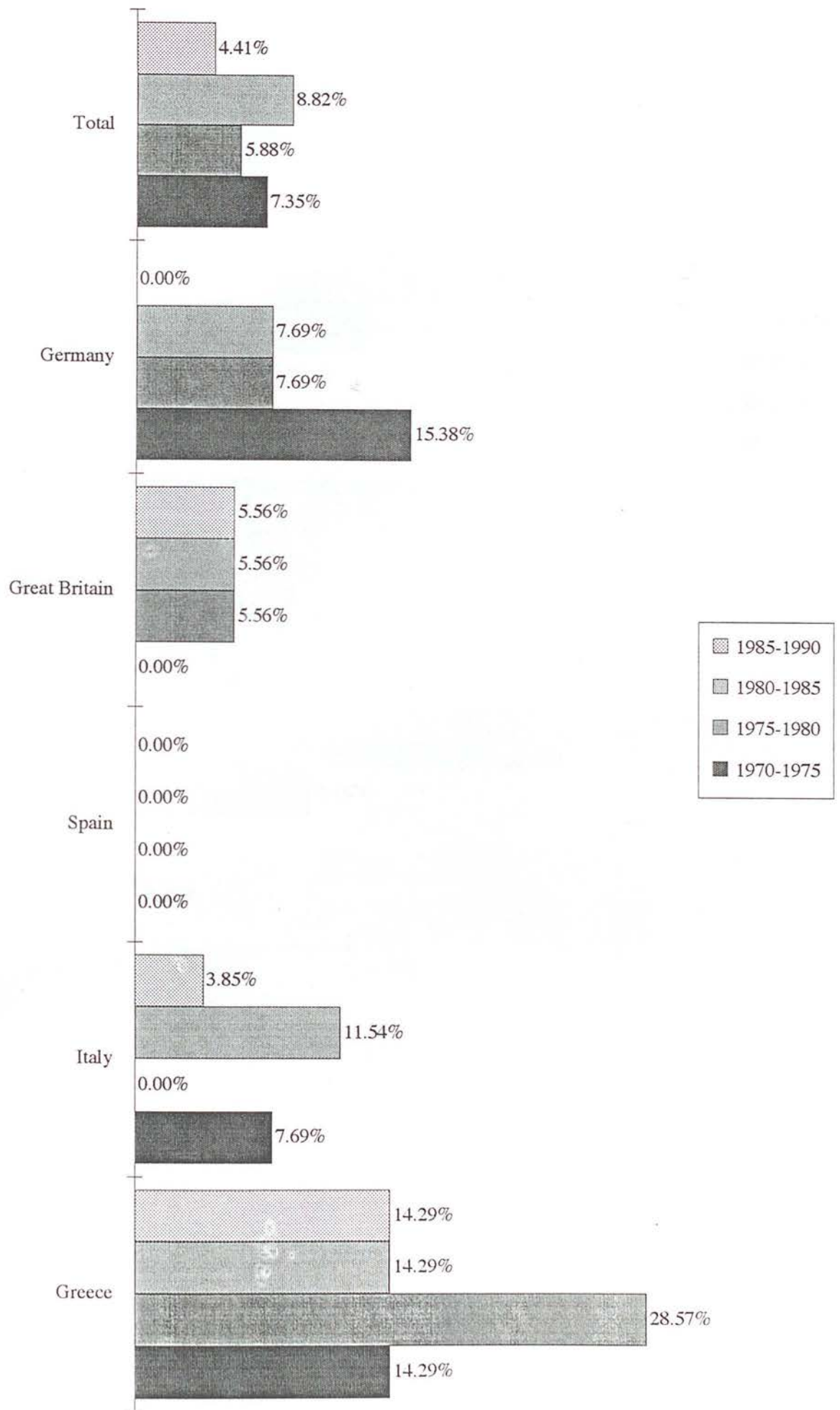


Chart.13.9

Austerity reflected in the Form of Products



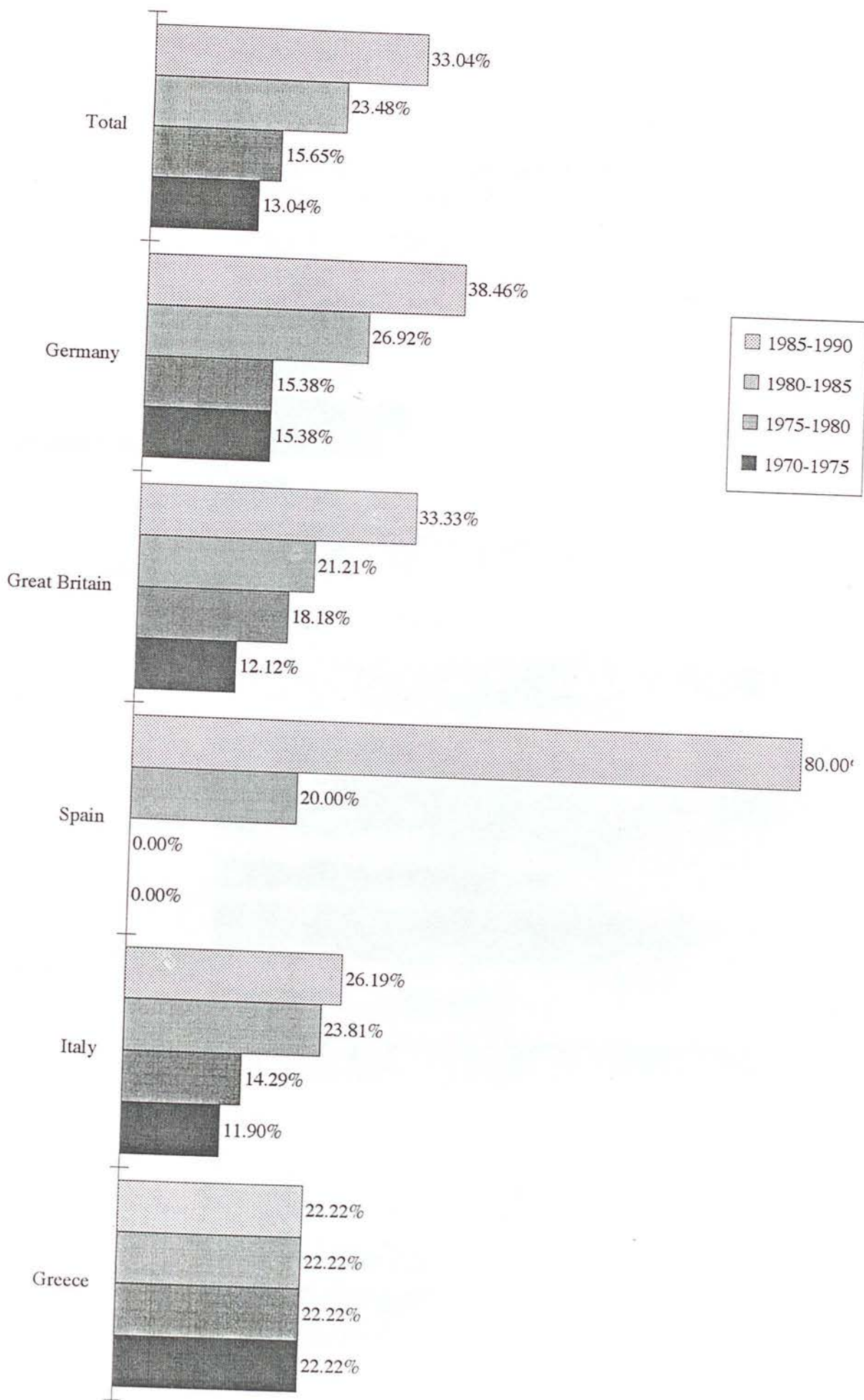


Chart.13.10

Innovation reflected in the Form of Products

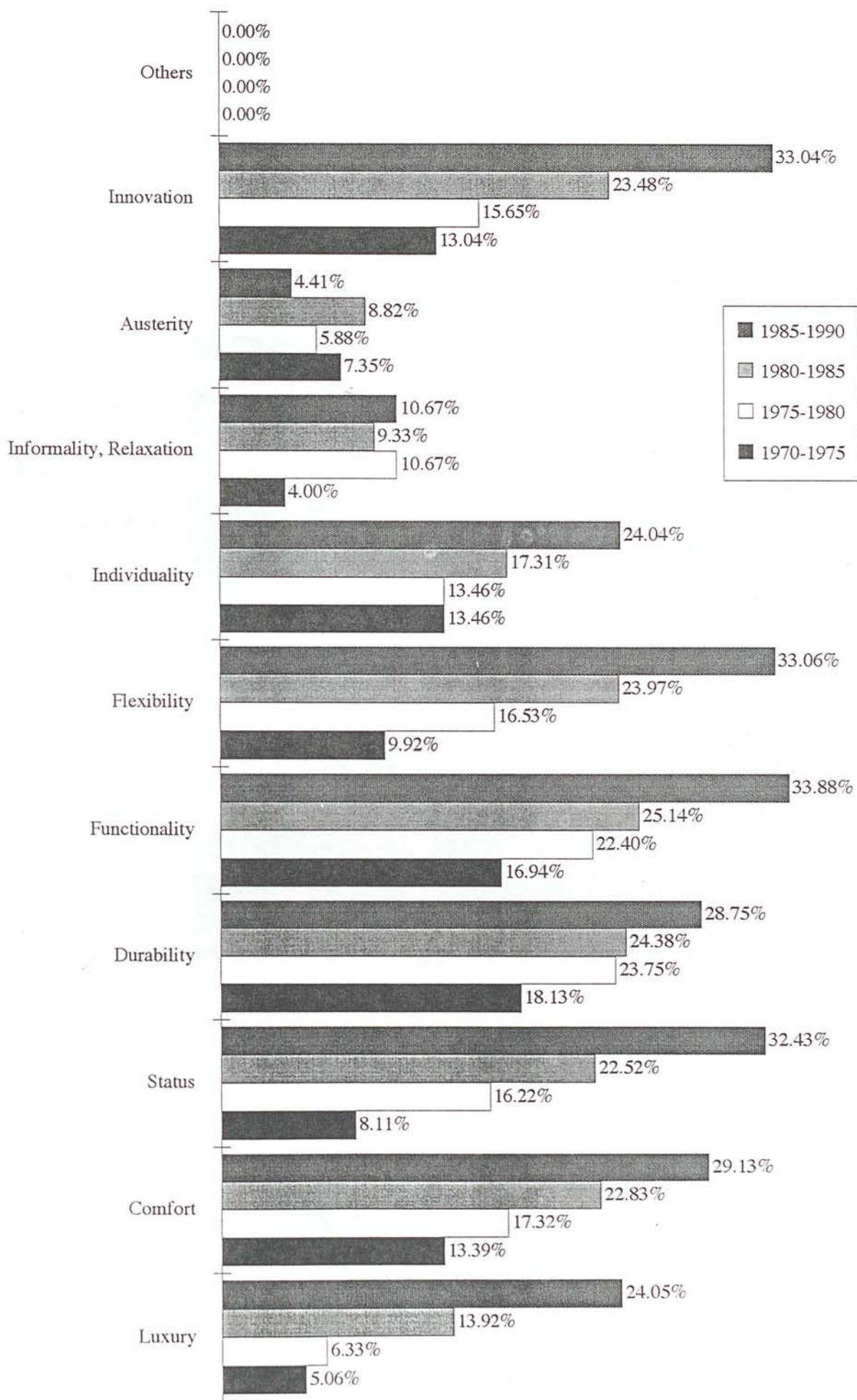


Chart.13.11 Concepts reflected in the Form of Products during the period 1970 - 1990

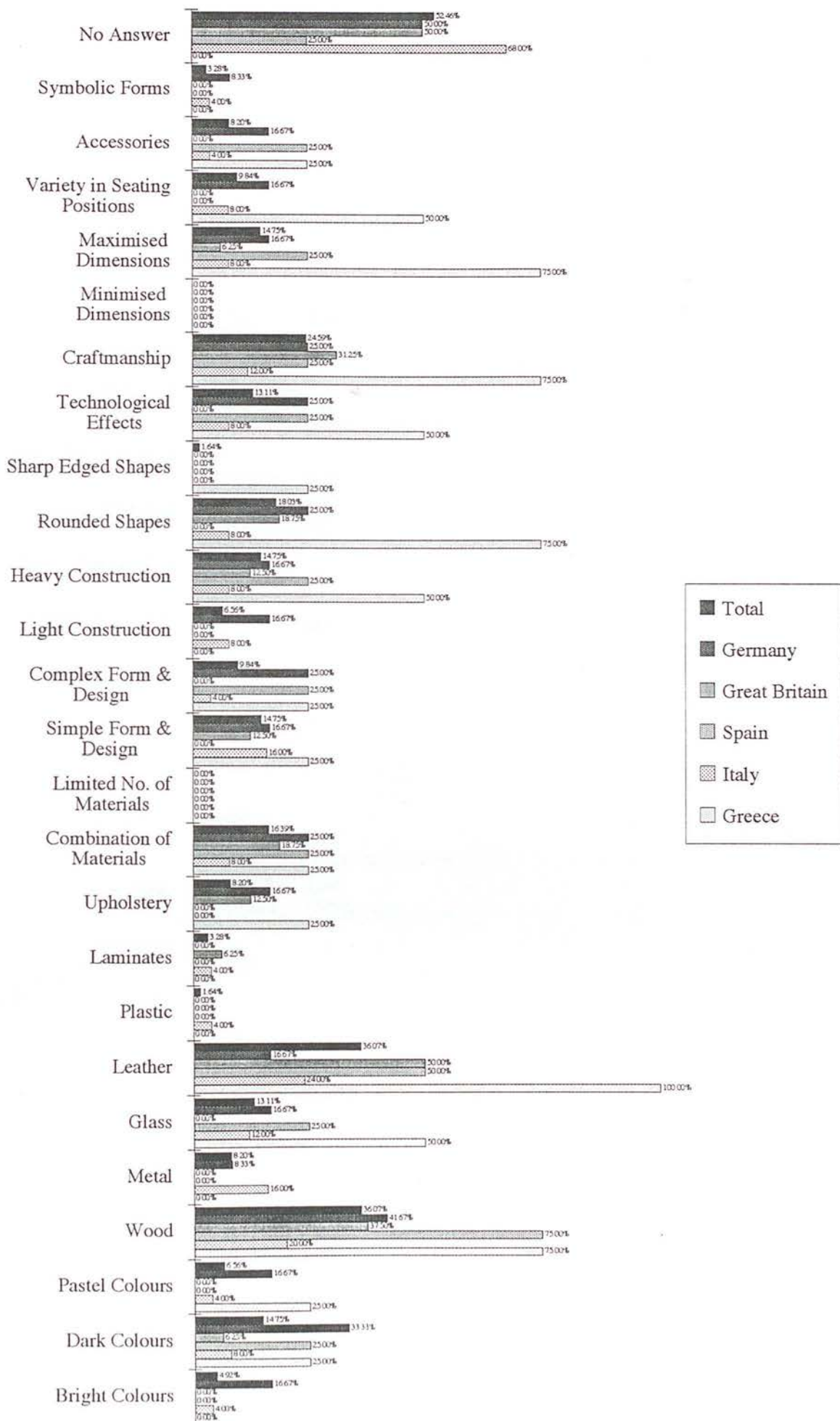


Chart.14.1 Means by which Luxury is reflected in the Company's Production



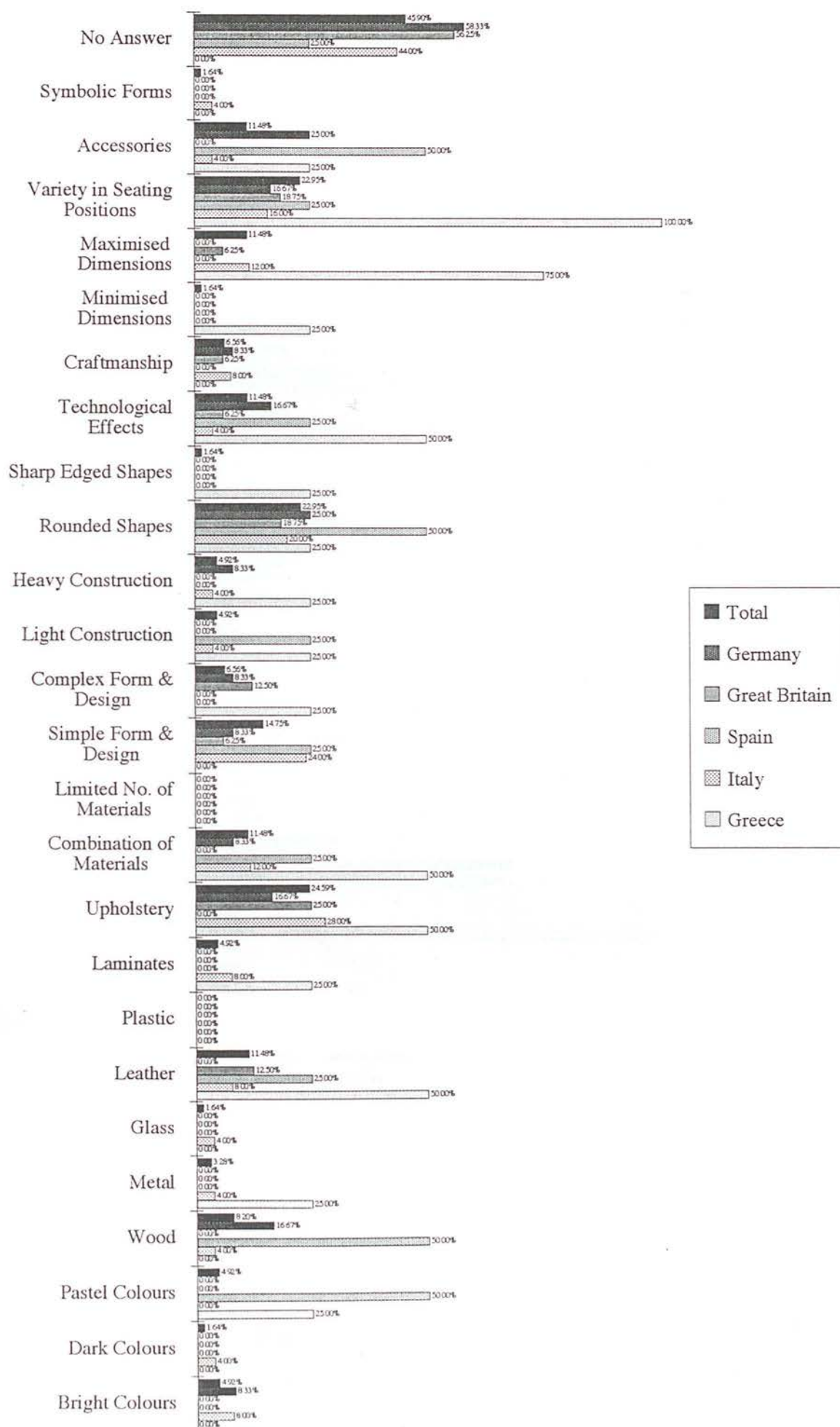


Chart.14.2

Means by which Comfort is reflected in the Company's Production

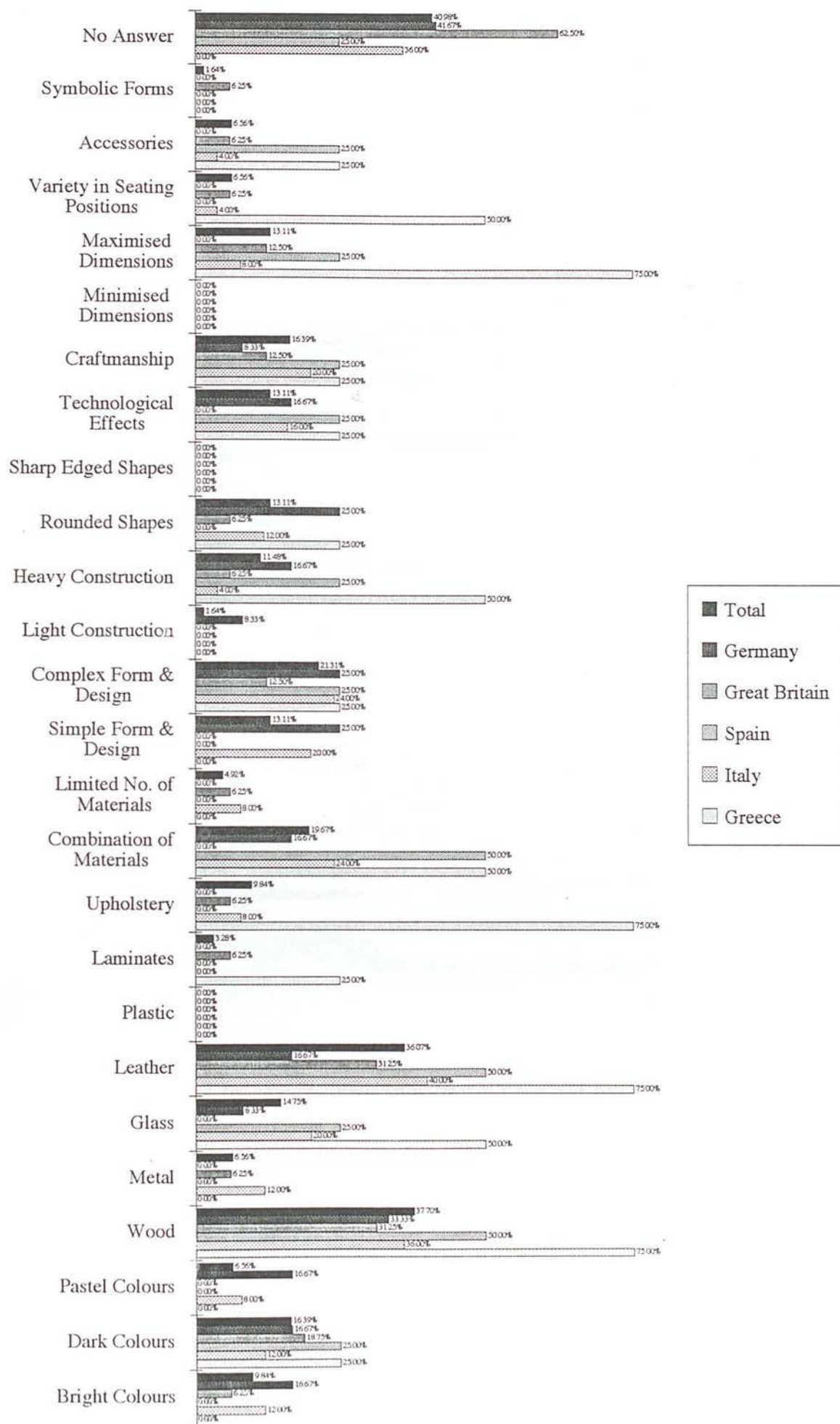


Chart.14.3

Means by which Status is reflected in the Company's Production

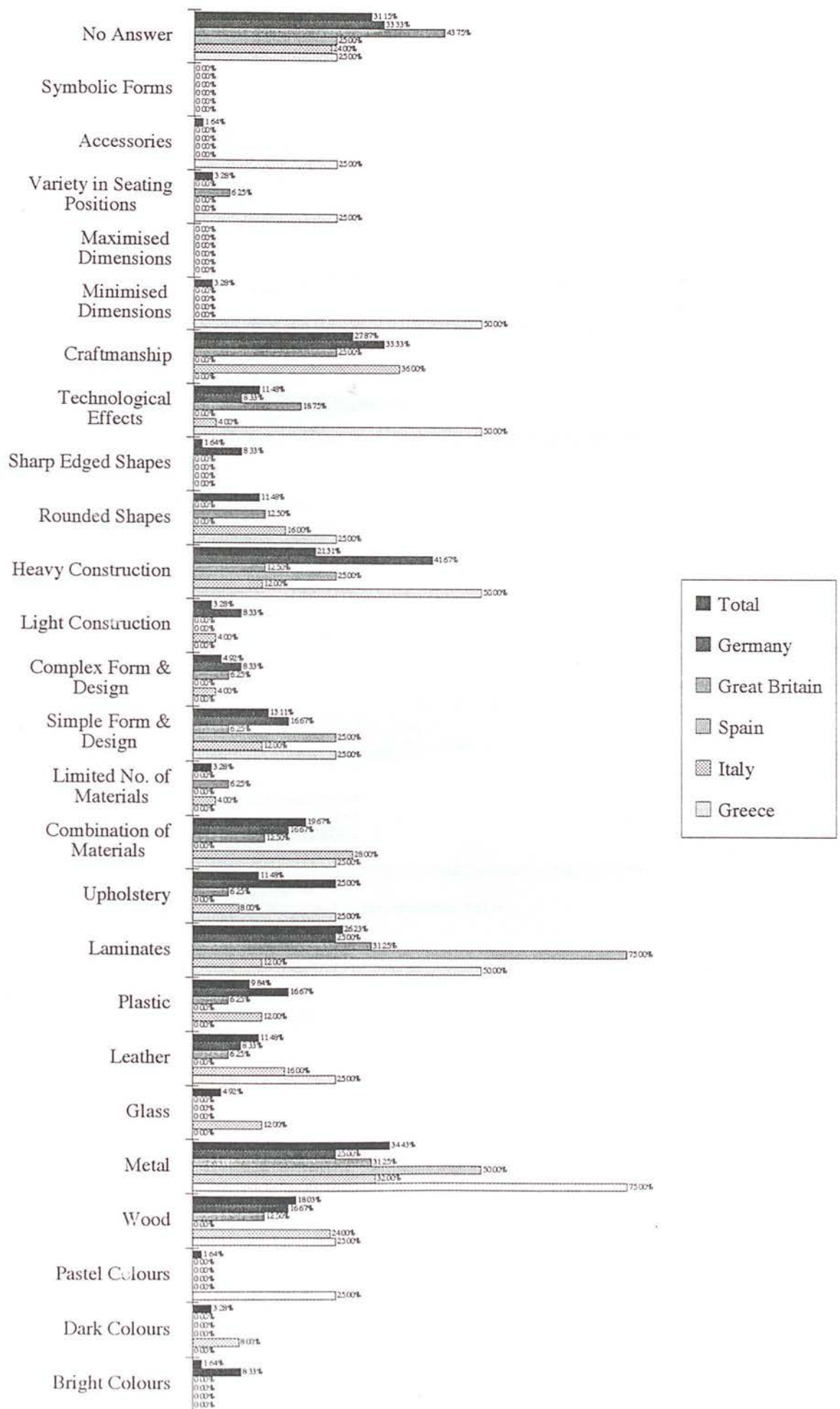


Chart.14.4 Means by which Durability is reflected in the Company's Production



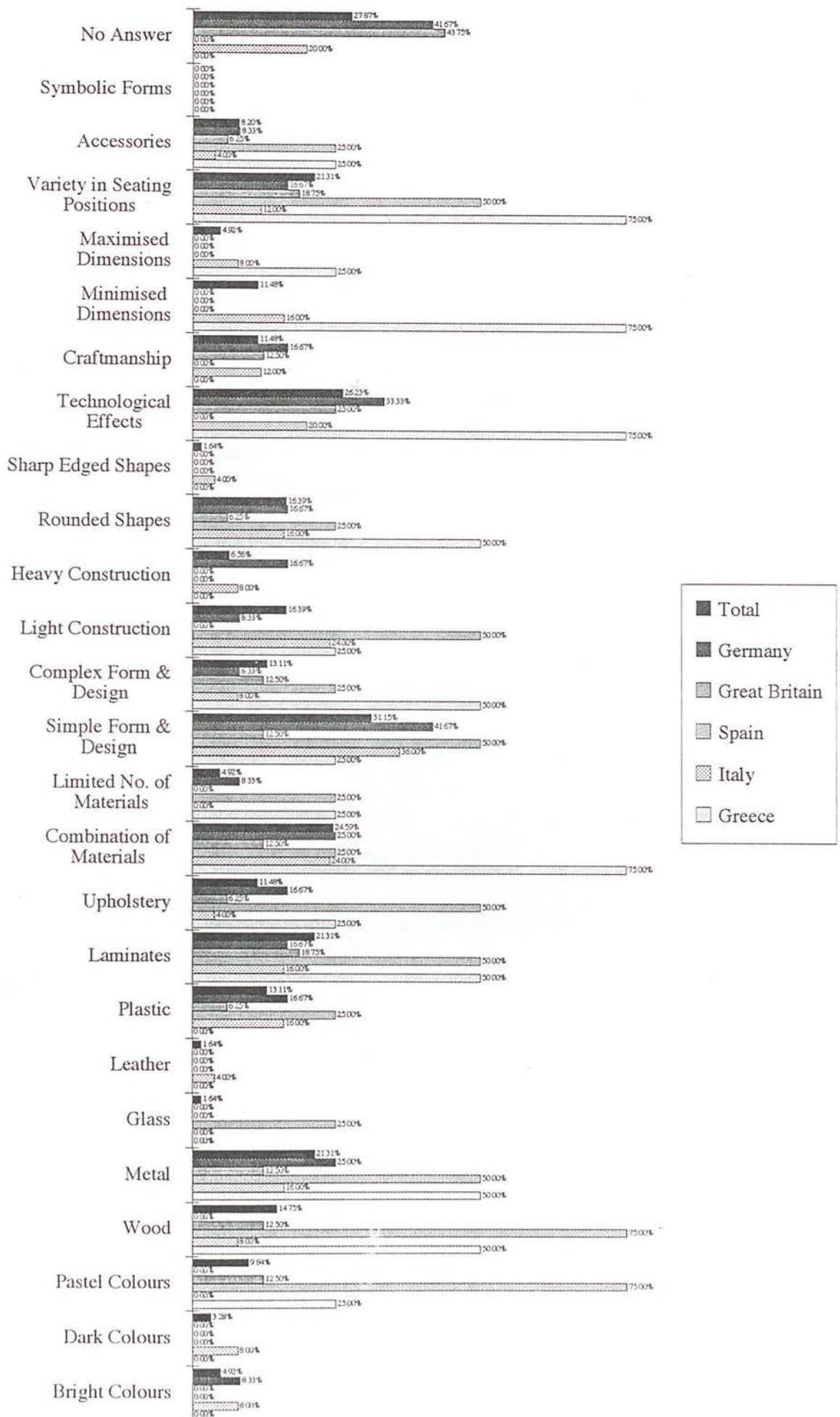


Chart.14.5 Means by which Functionality is reflected in the Company's Production

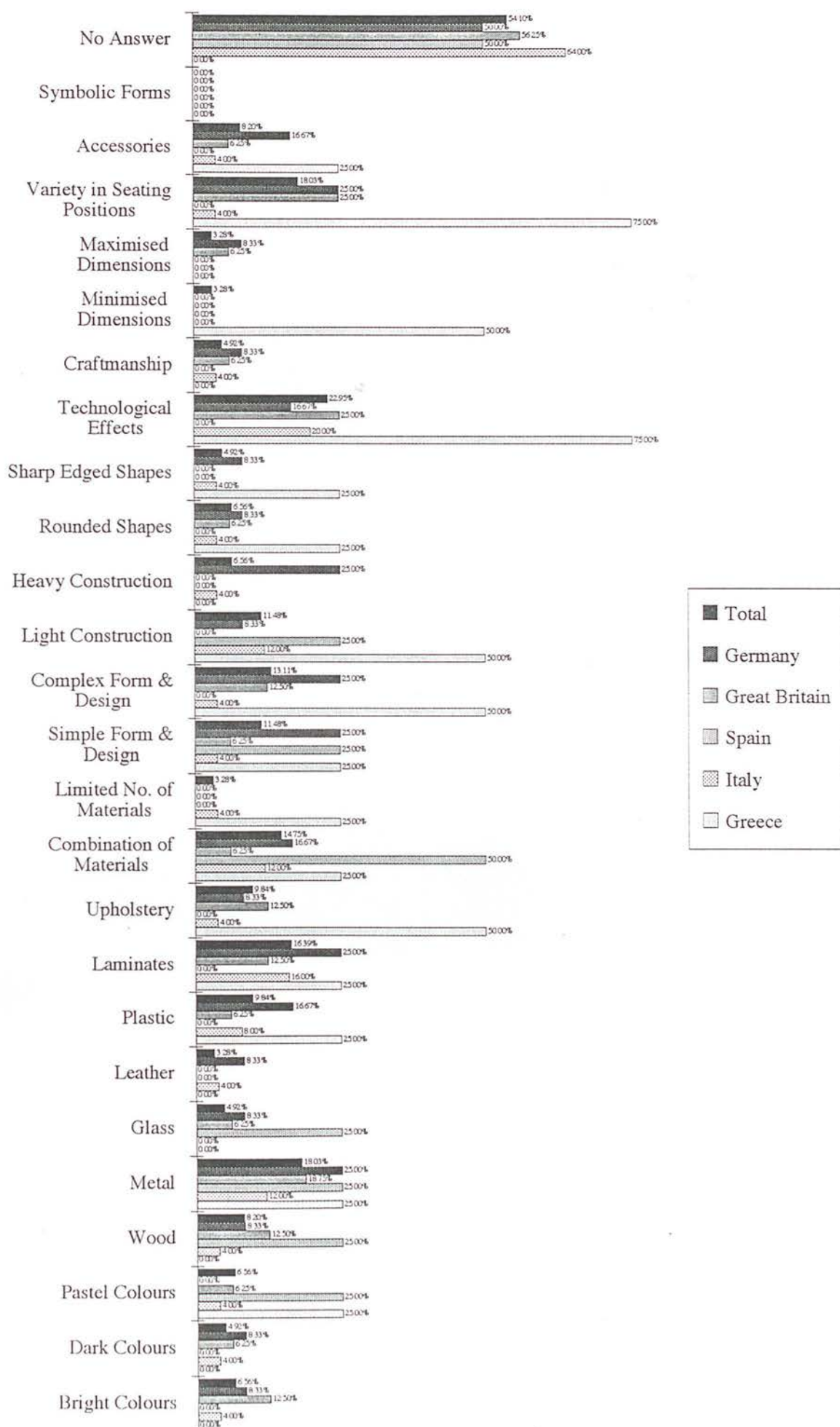


Chart.14.6 Means by which Flexibility is reflected in the Company's Production

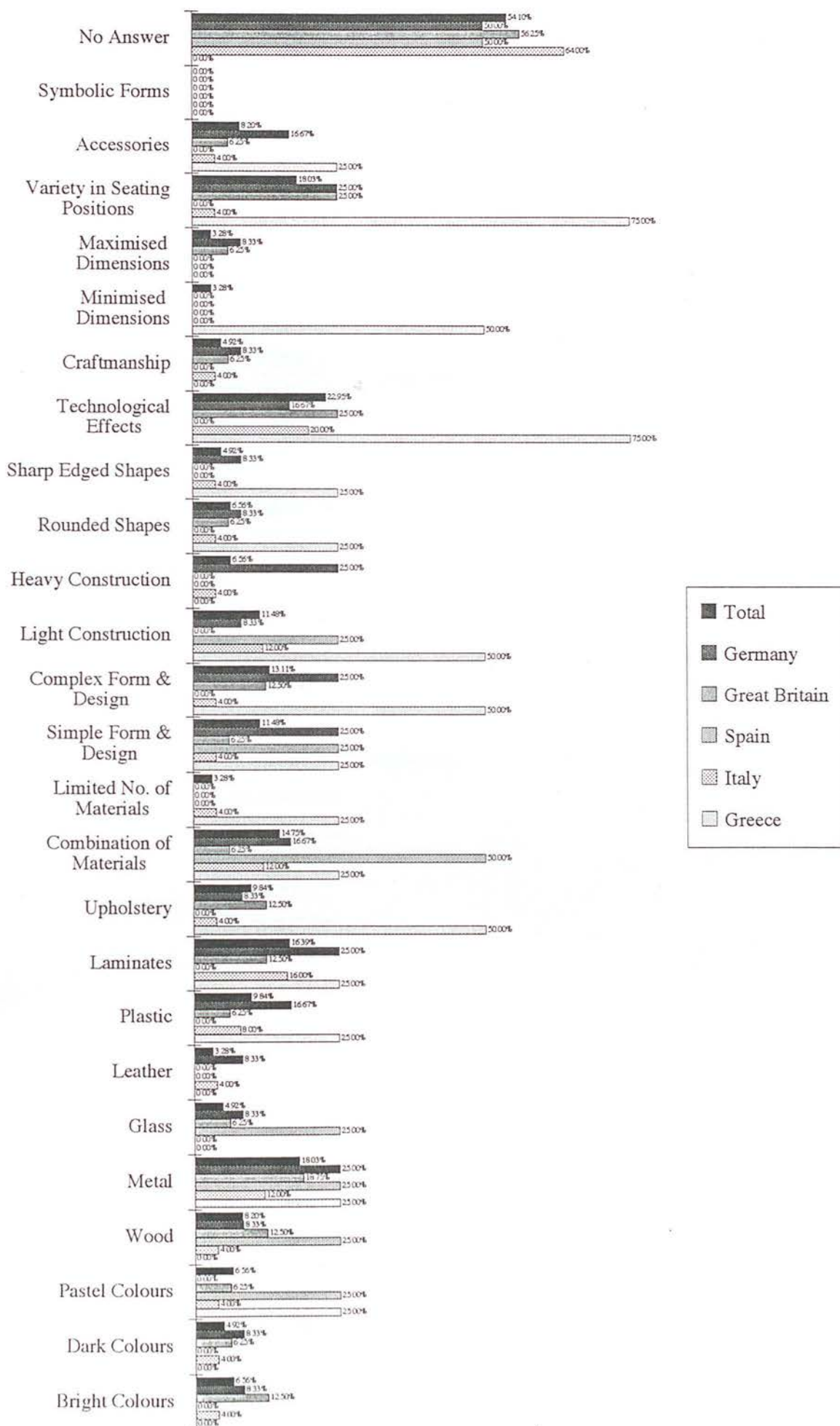


Chart.14.6 Means by which Flexibility is reflected in the Company's Production



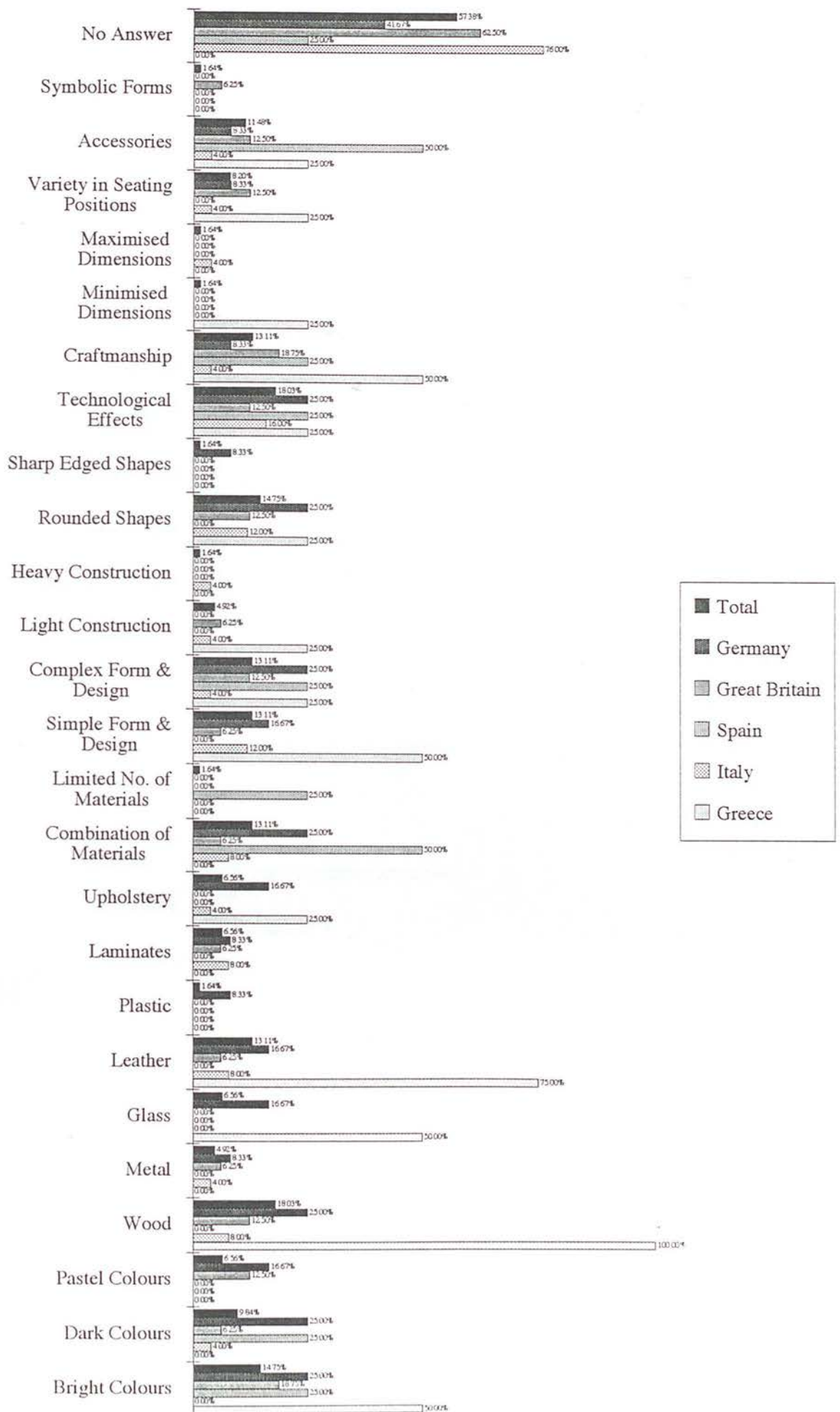


Chart.14.7 Means by which Individuality is reflected in the Company's Production

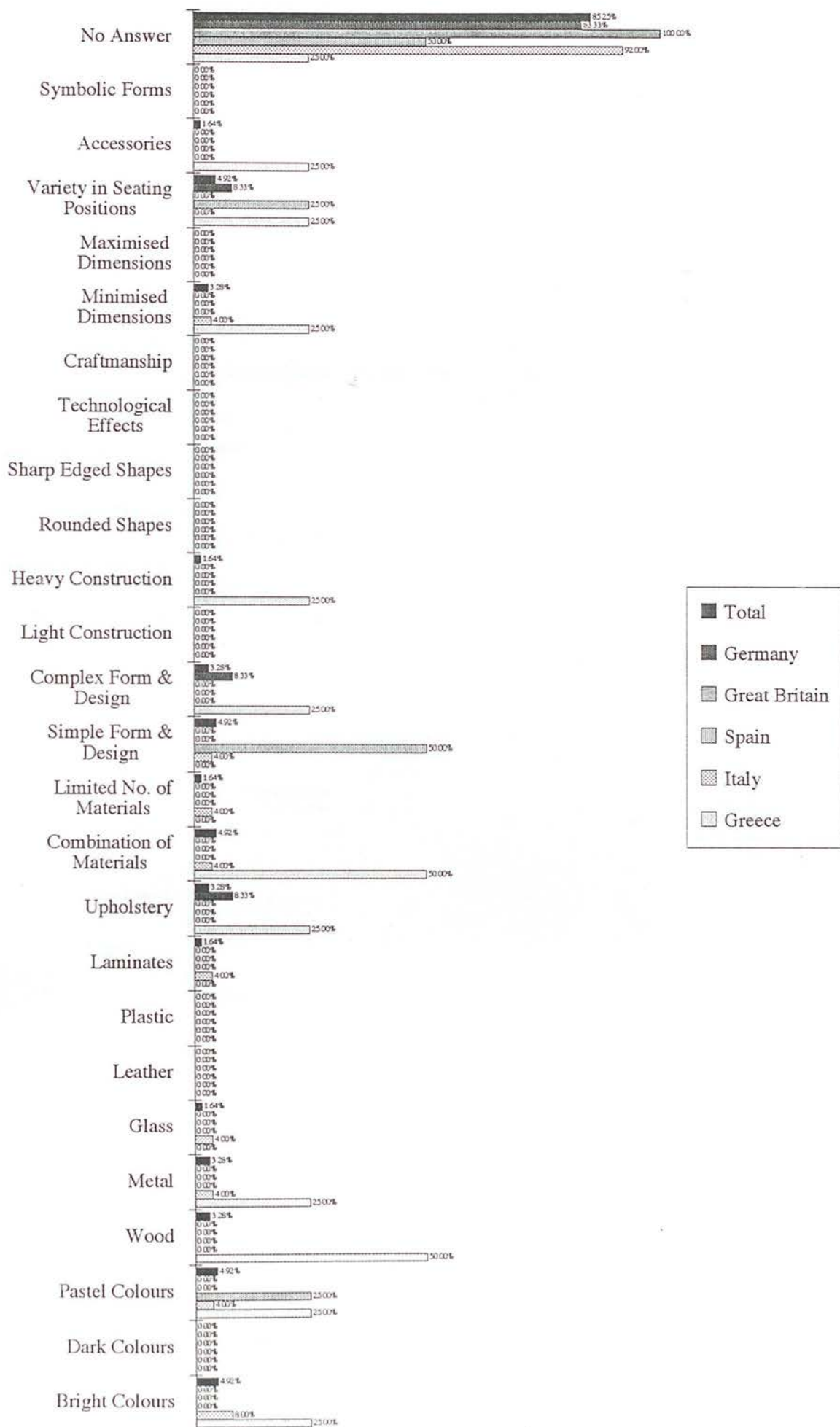


Chart.14.8 Means by which Informality and Relaxation are reflected in the Company's Production

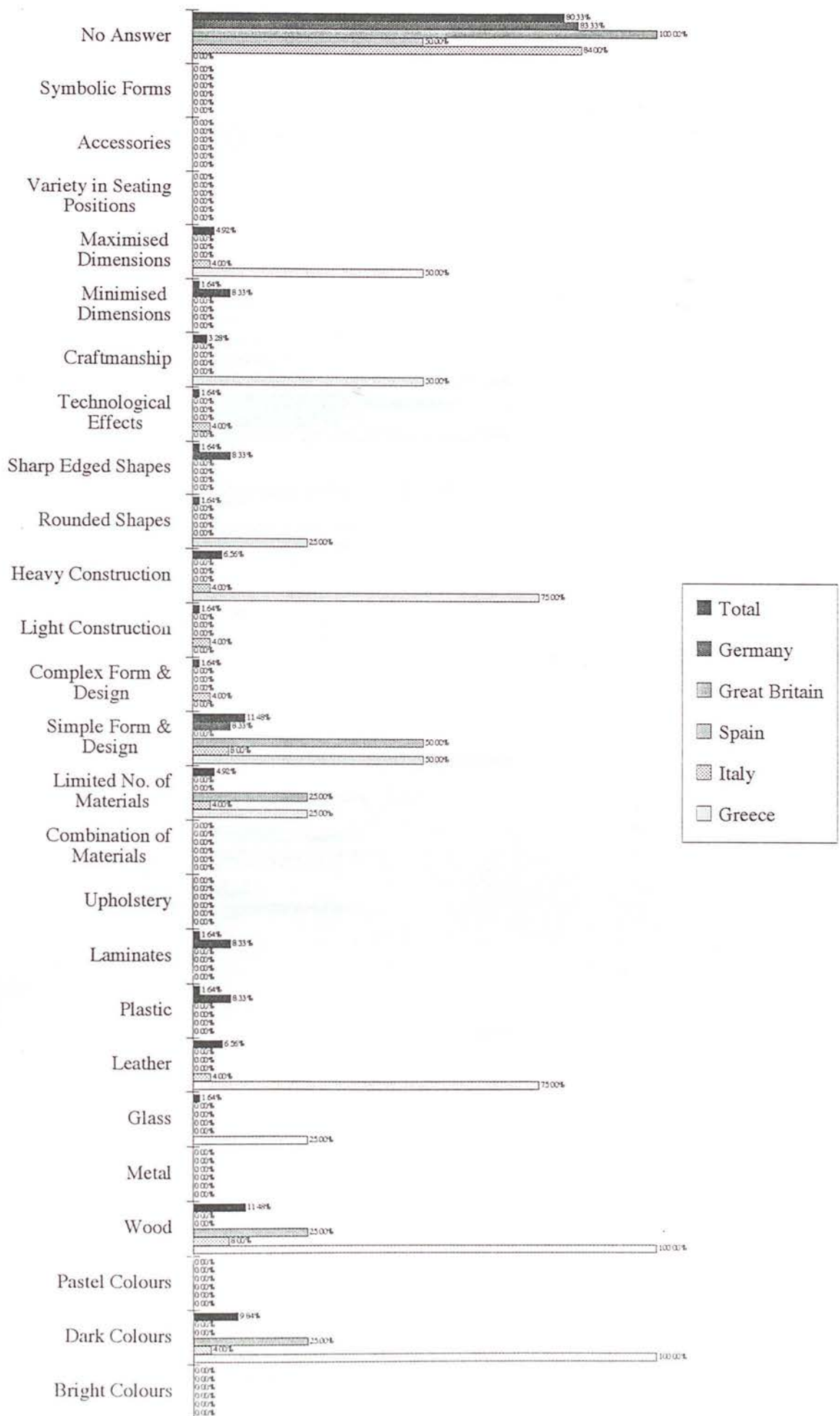


Chart.14.9 Means by which Austerity is reflected in the Company's Production



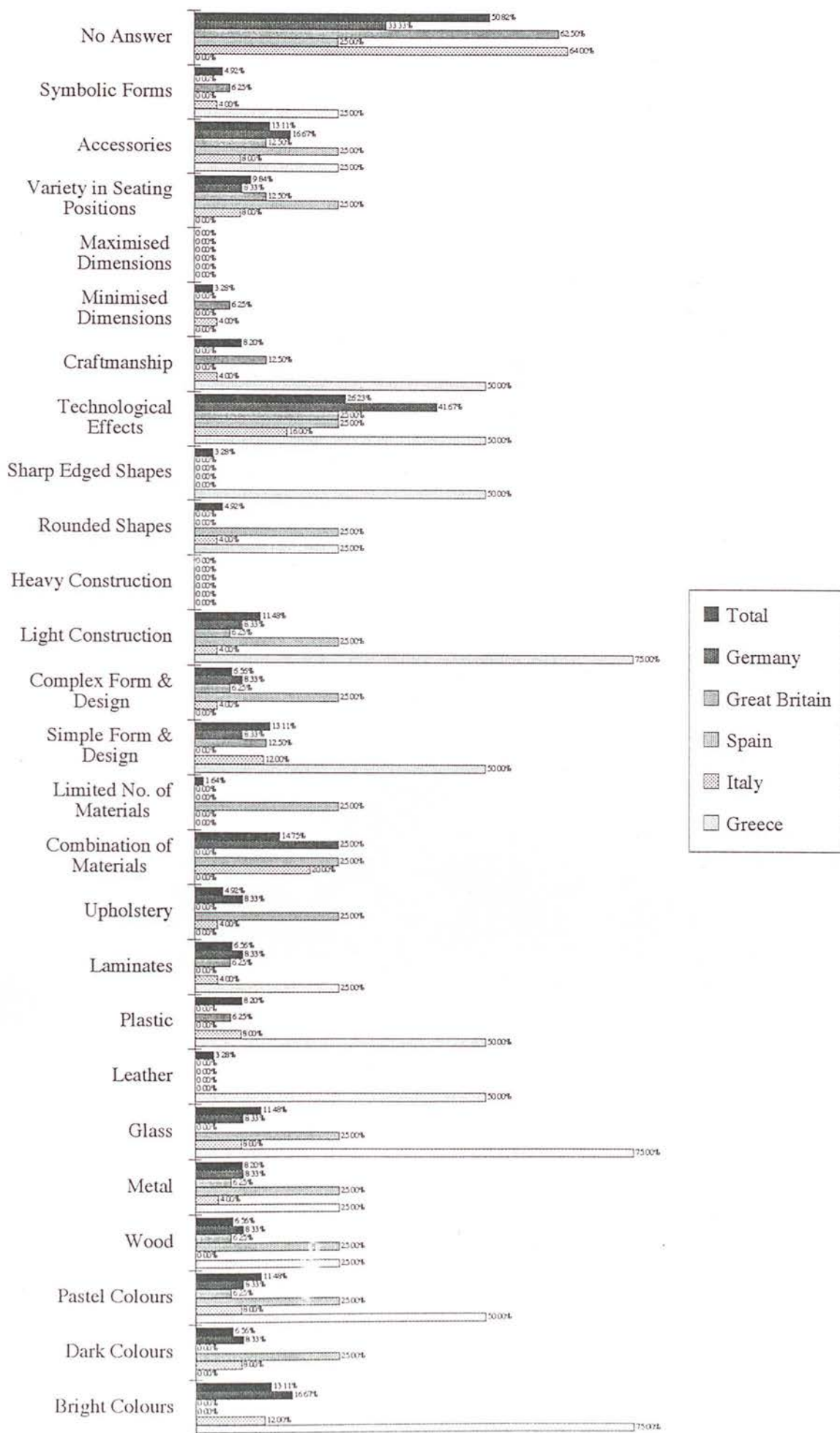


Chart.14.10 Means by which Innovation is reflected in the Company's Production

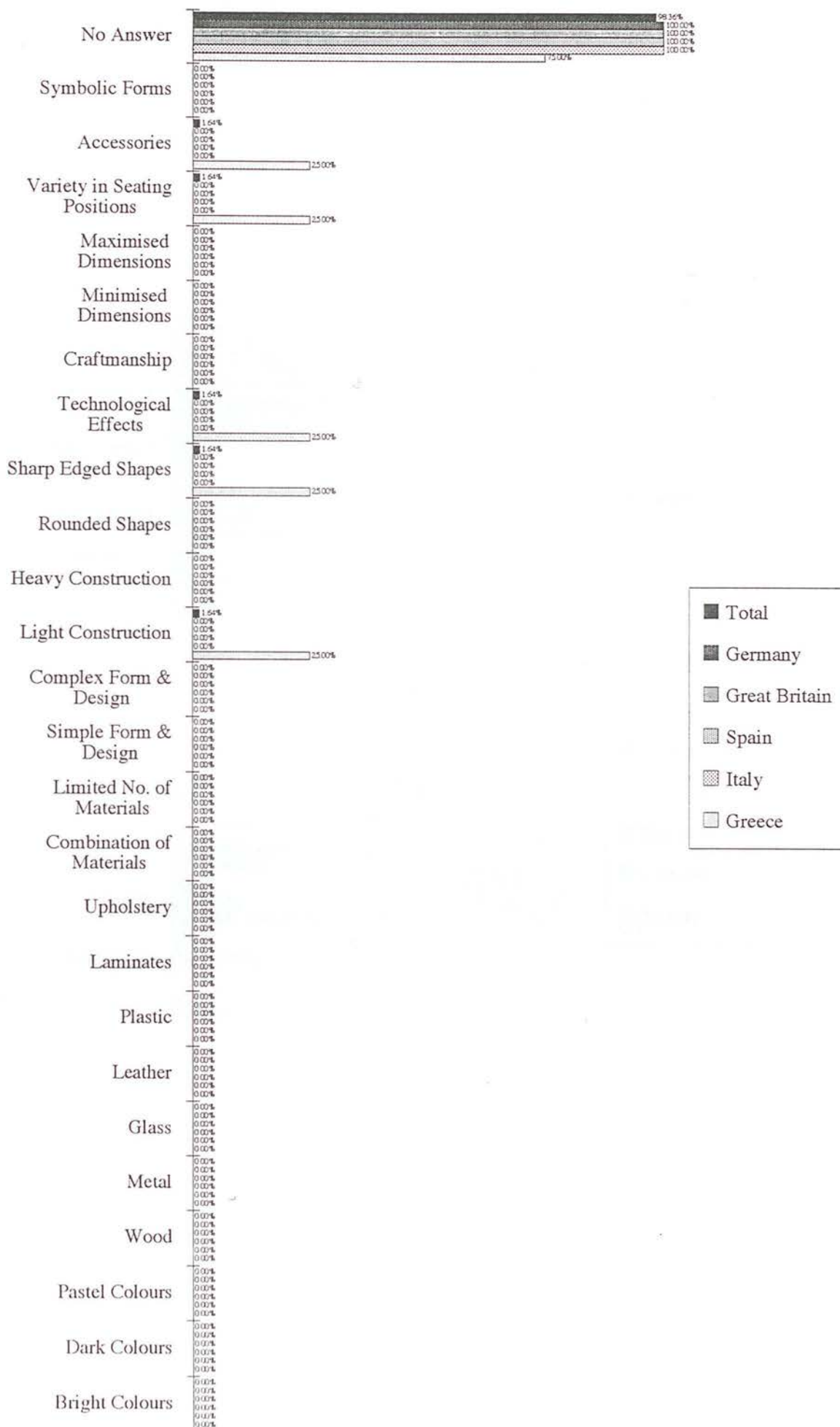


Chart.14.11 Means by which Other Concepts and Attributes are reflected in the Company's Production

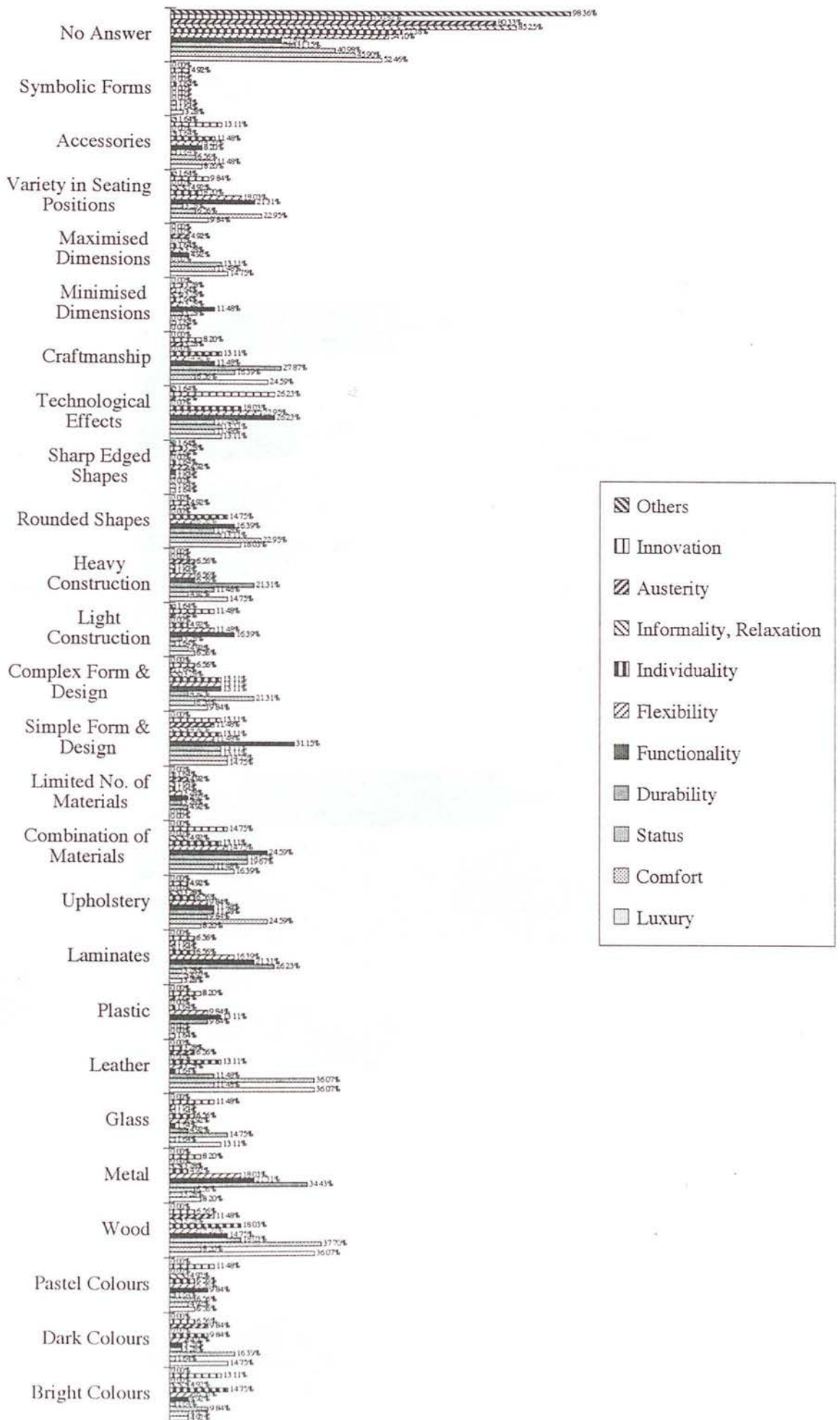


Chart.14.12 Means by which Concepts and Attributes are reflected in the Company's Production



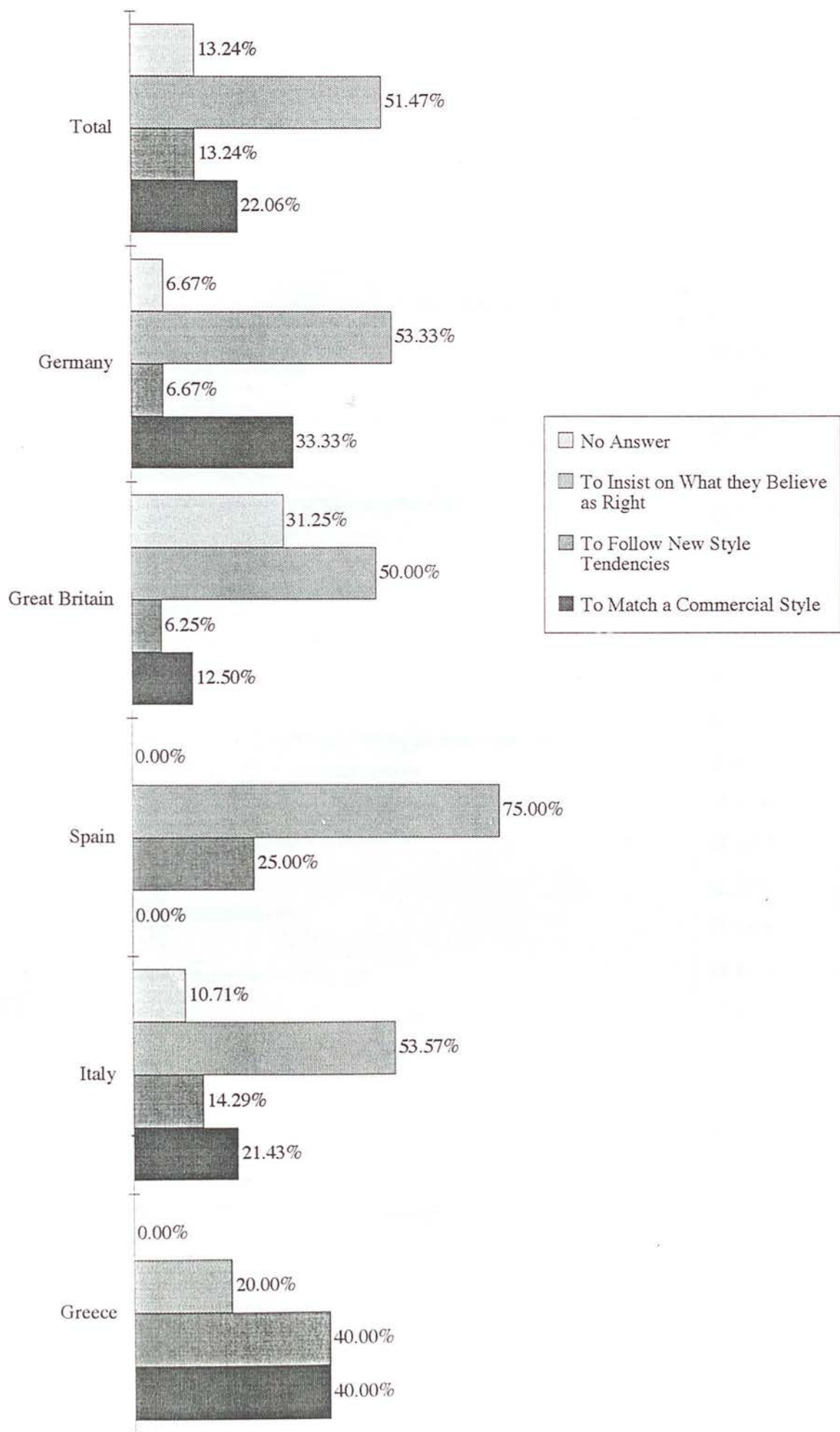


Chart.15

The Company's Attitude Towards the Form of Production

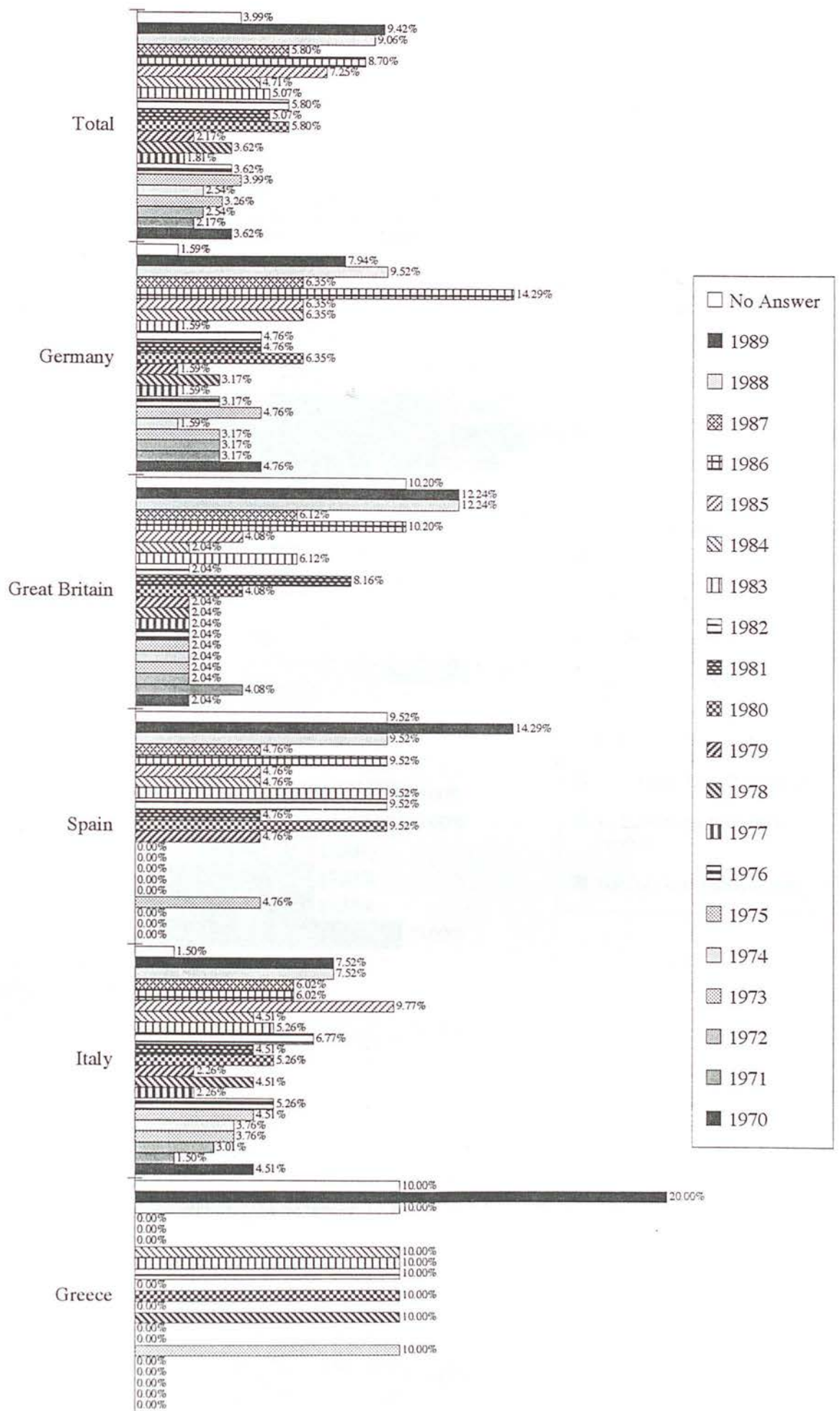


Chart.16.1

Years of Changes in the Appearance of Company's Products

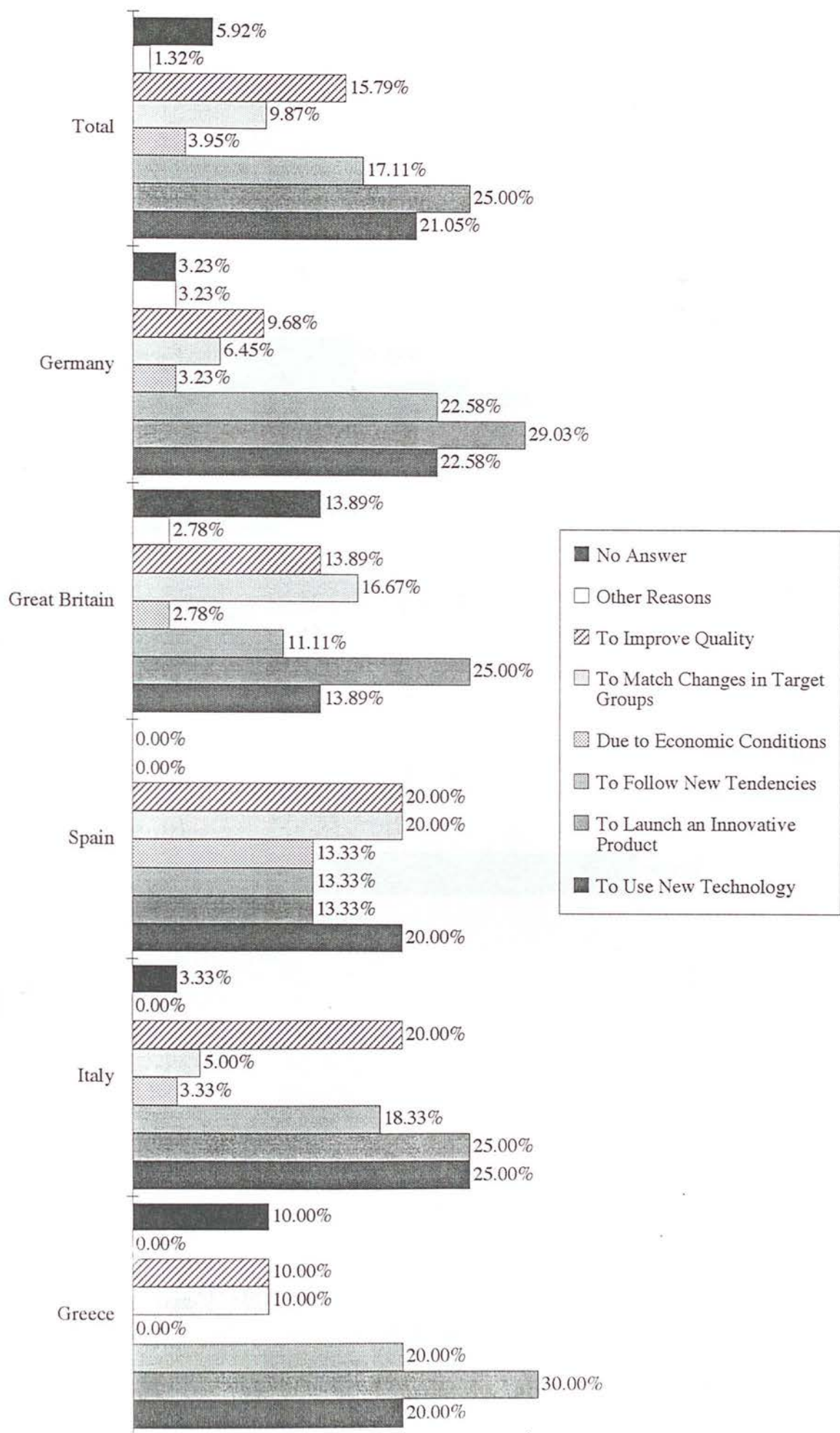


Chart.16.2

Reasons for Changing the Appearance of Products



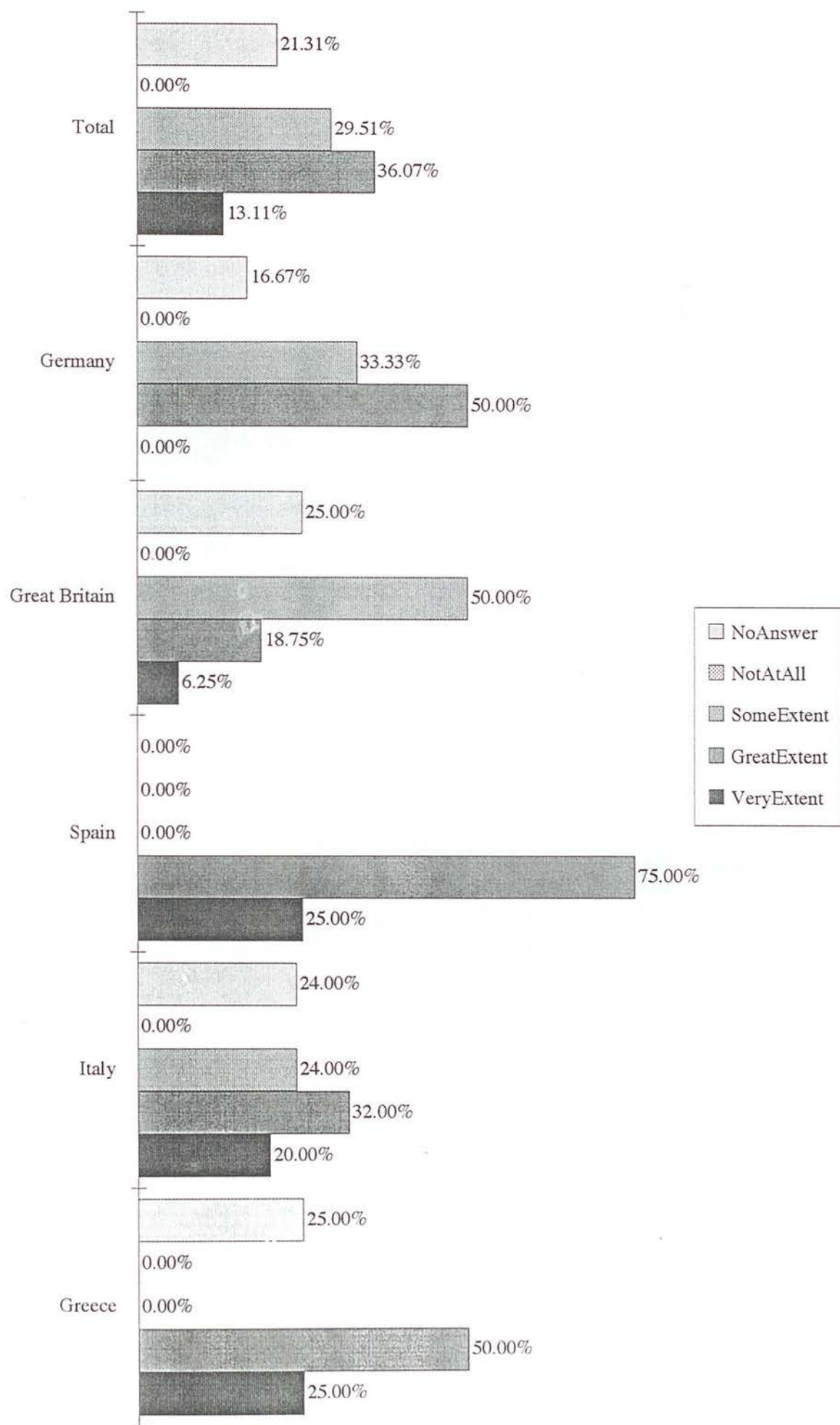


Chart.17.1

Design Affects by Promoting the Use of New Materials

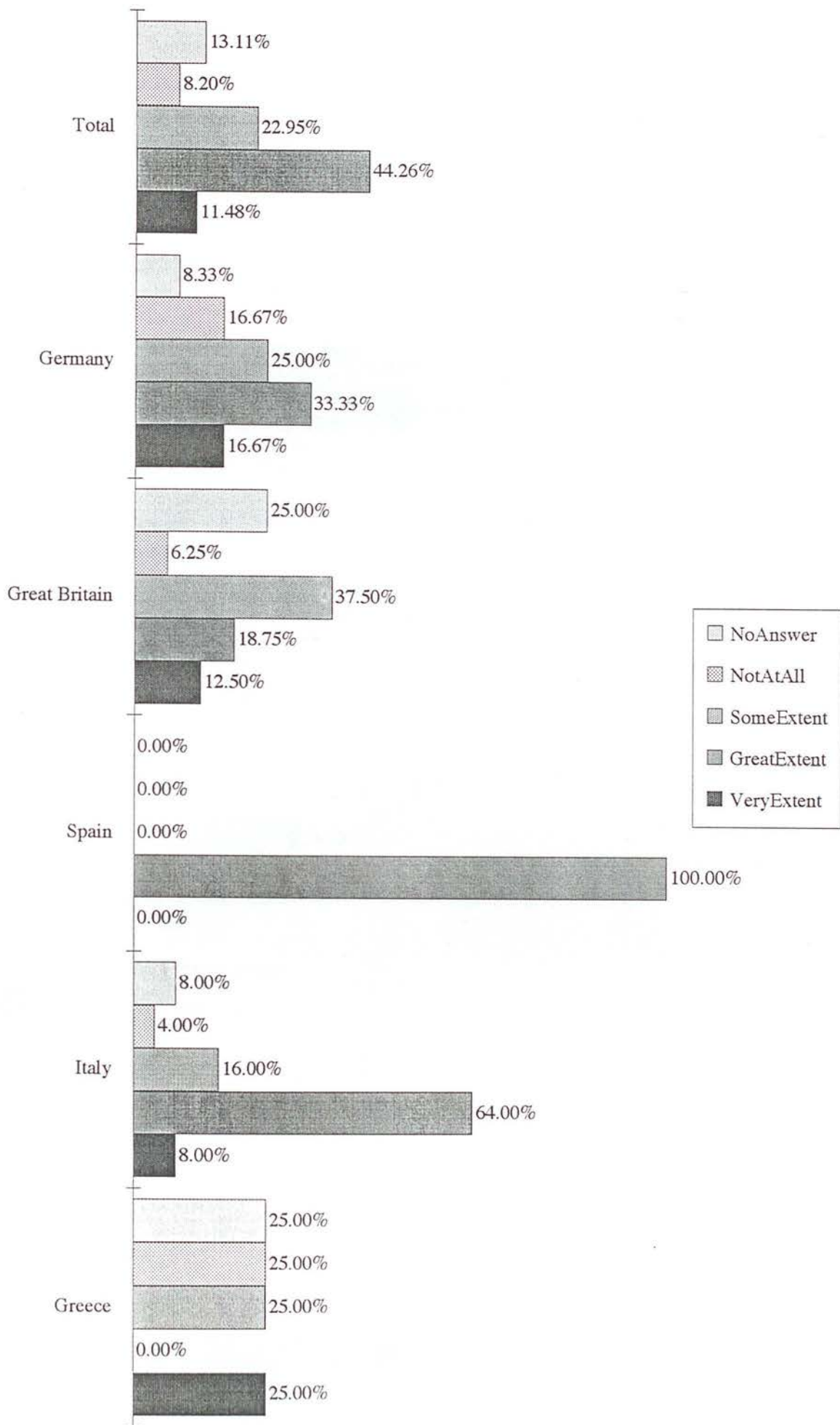


Chart.17.2

Design Affects by Establishing New Needs

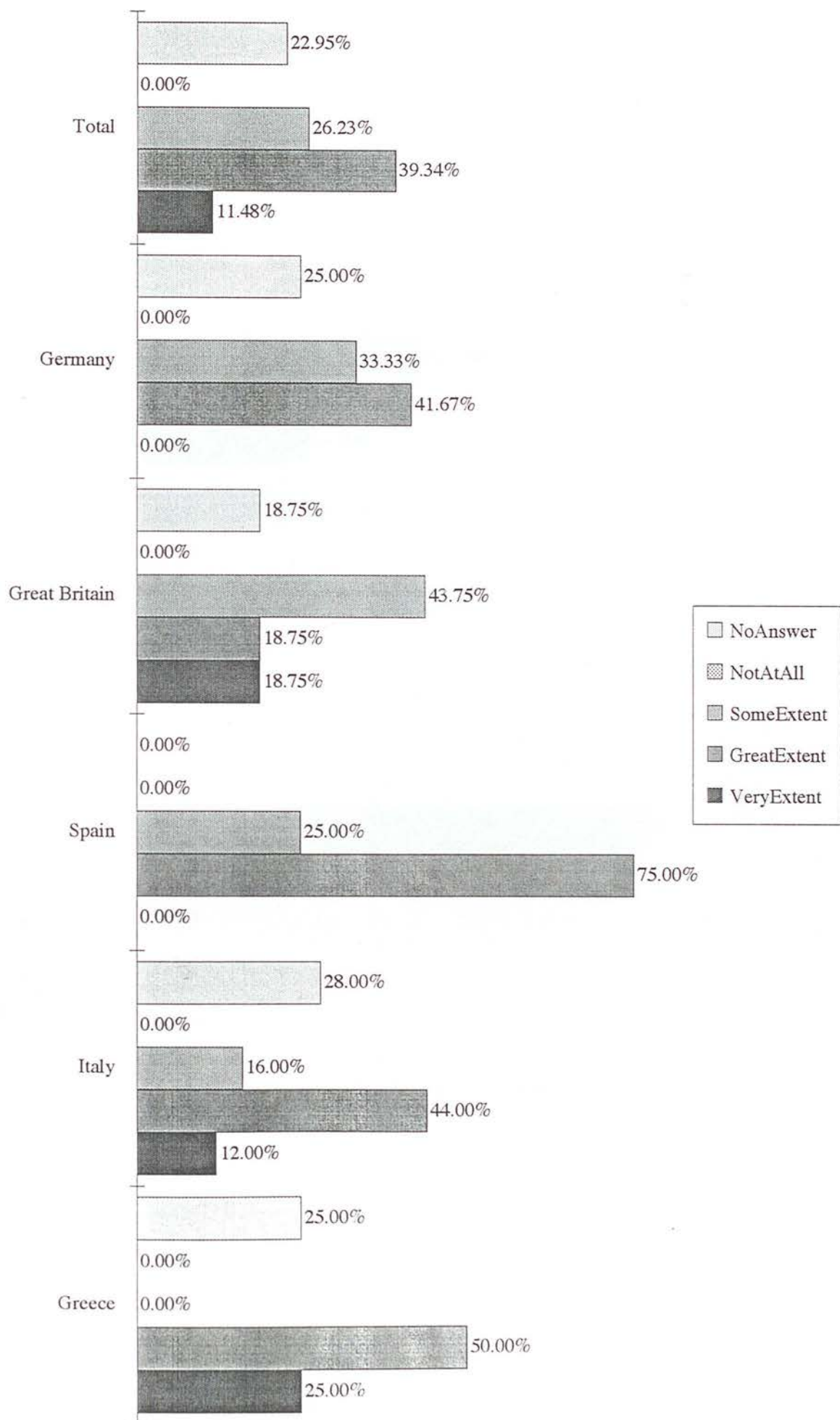


Chart.17.3

Design Affects by Introducing New Technology



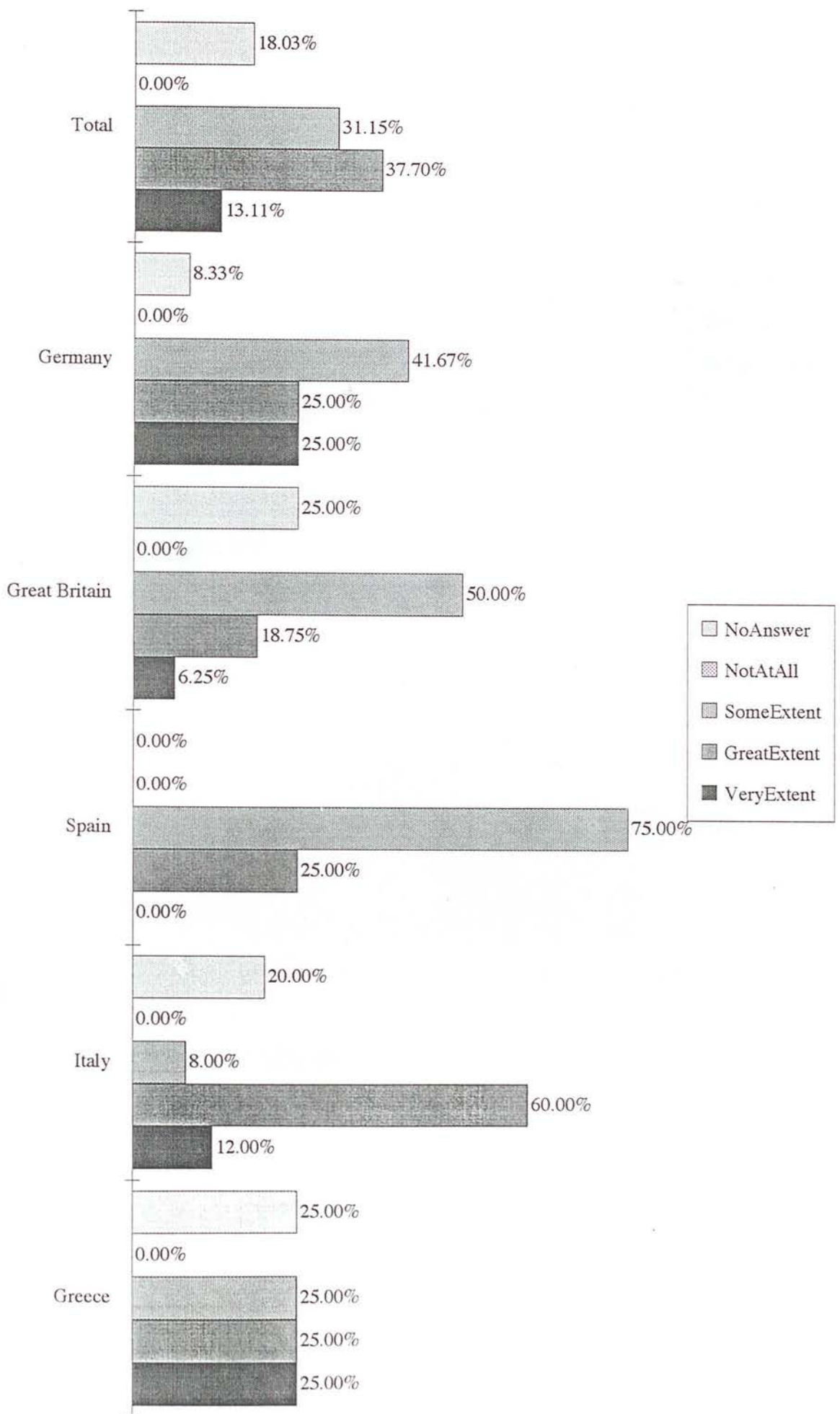


Chart.17.4

Design Affects by Changing the Public's Taste

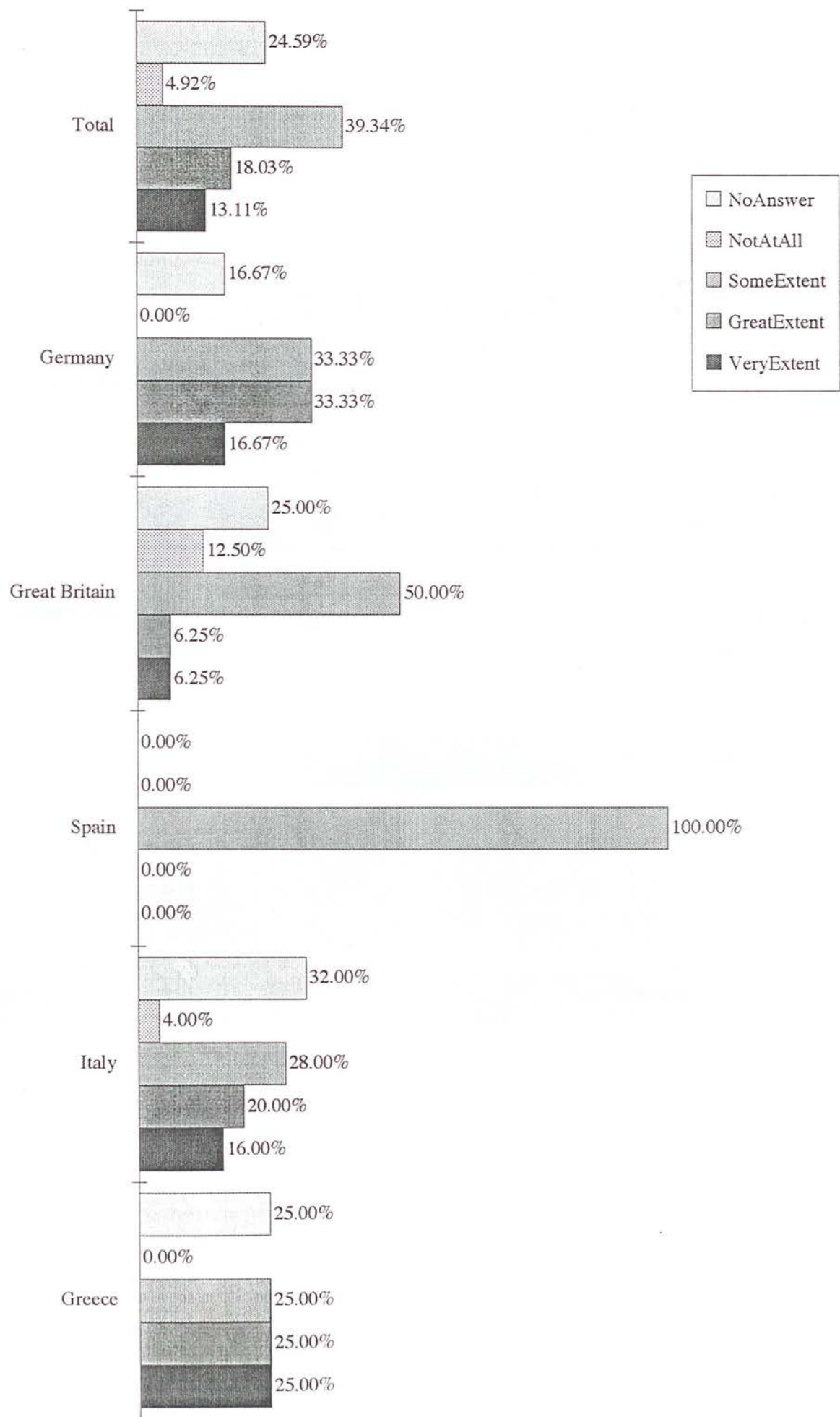


Chart.17.5

Design Affects by Changing the Public's Spatial Behaviour

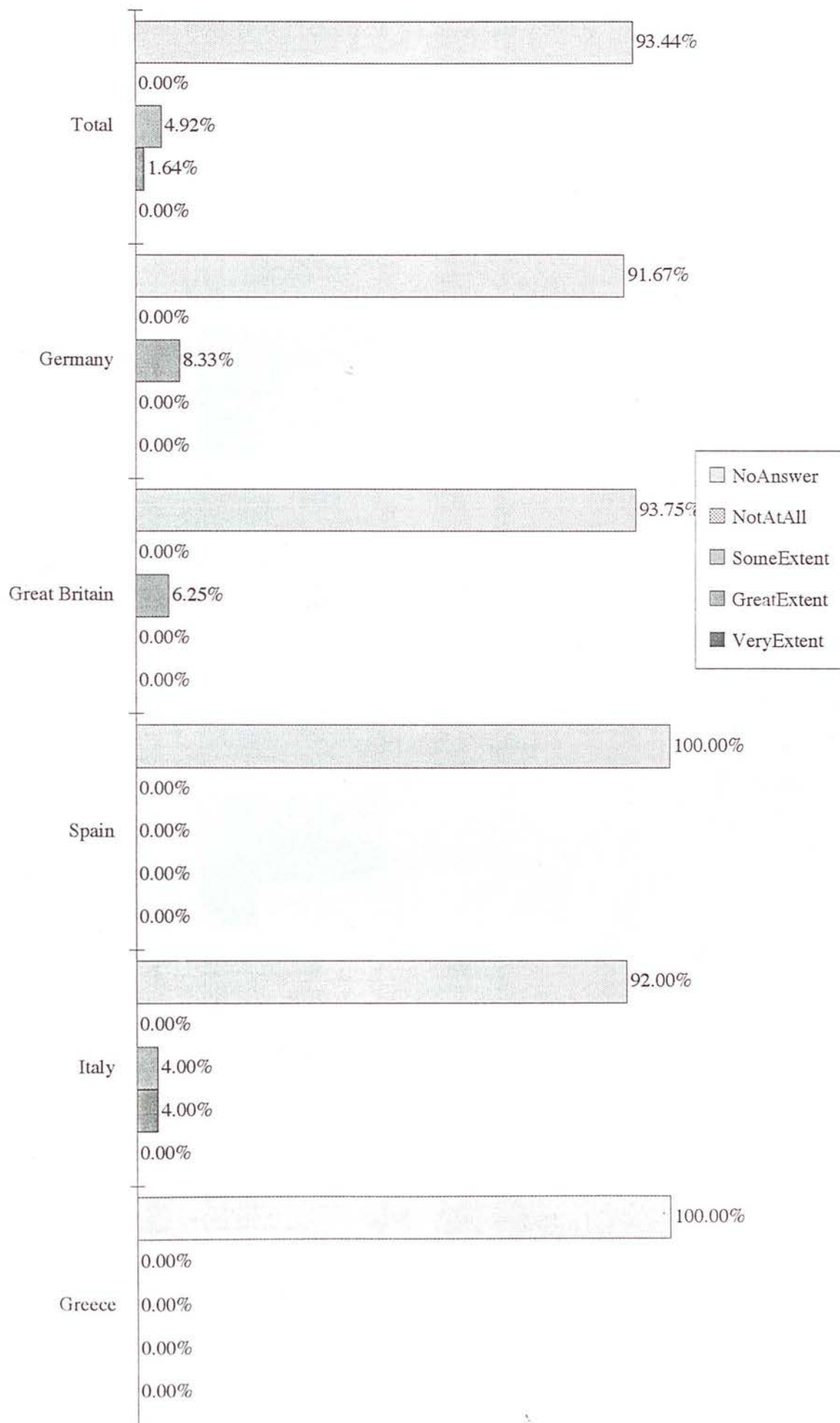


Chart.17.6

Design Affects Otherwise



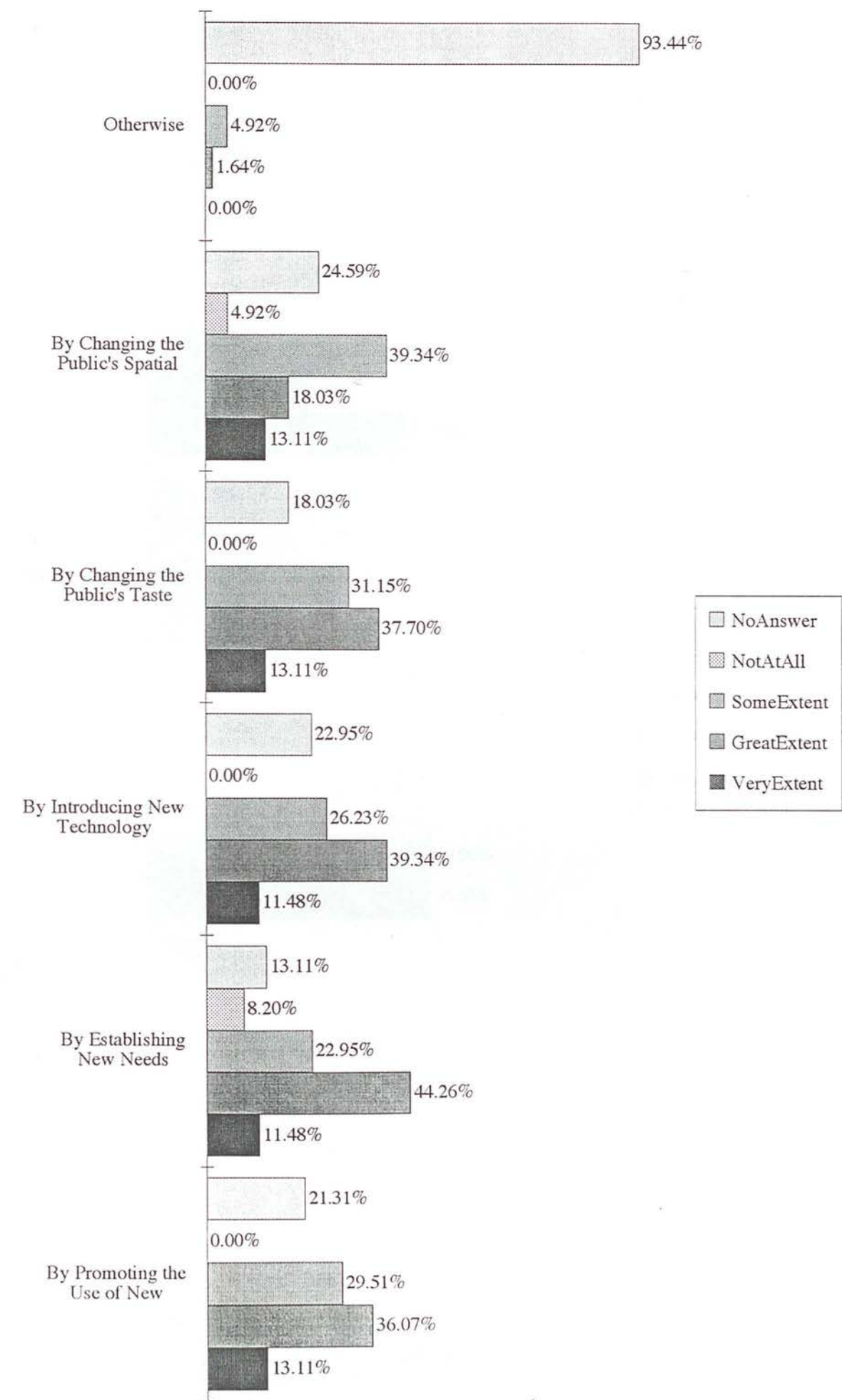


Chart.17.7

Means by which Design Affects Social Values and Attitudes

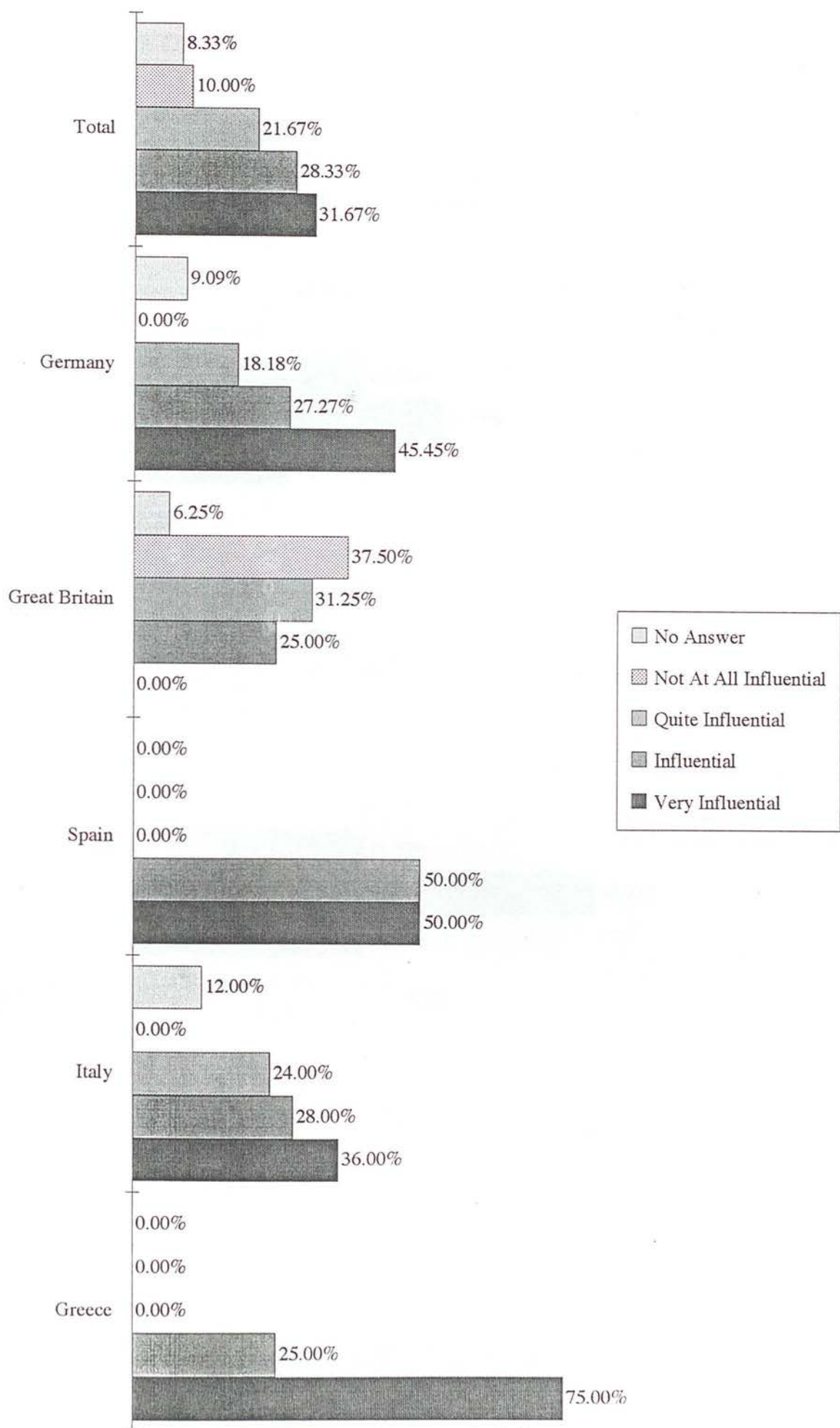


Chart.18.1

Mass Media Influencing Consumers' Taste

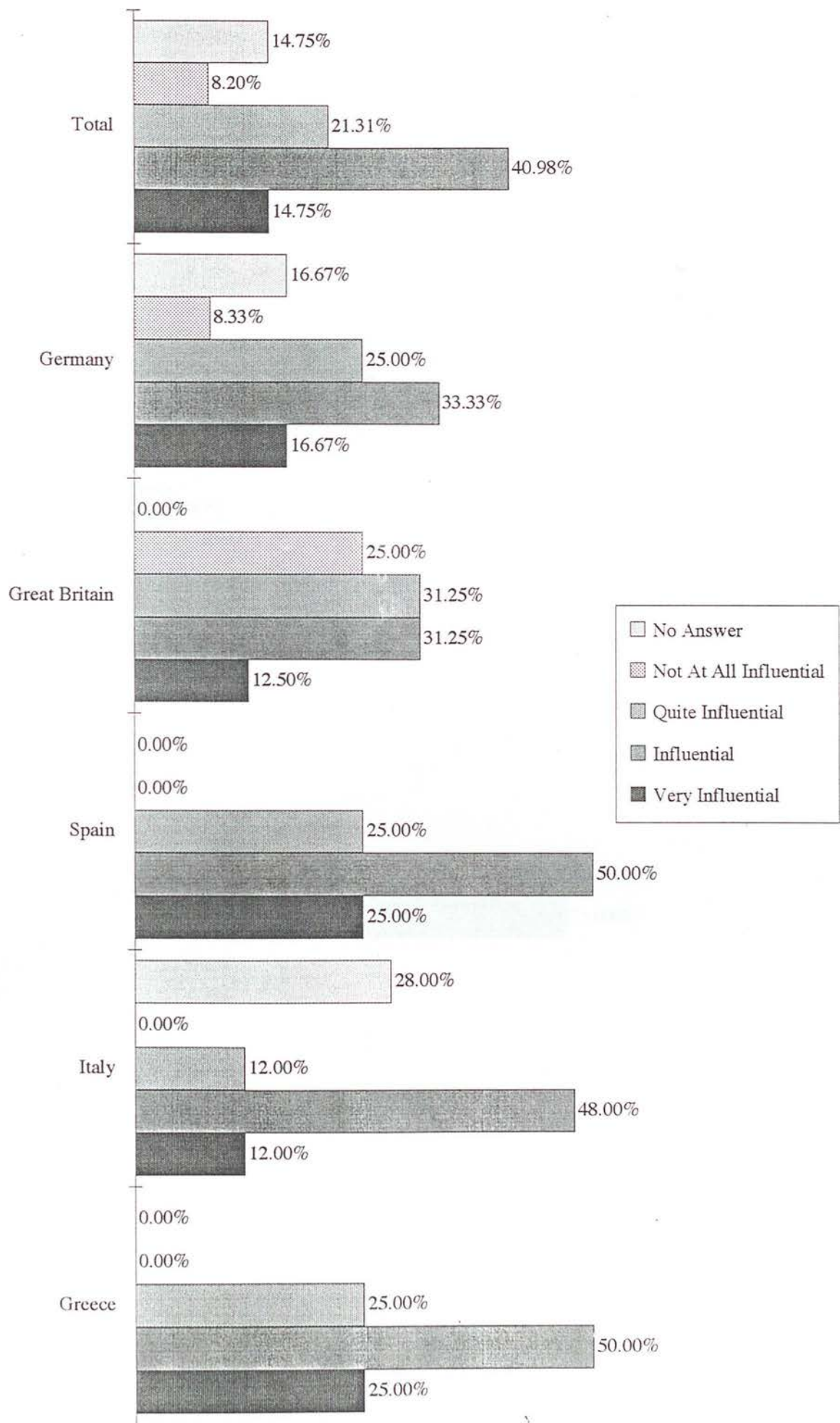


Chart.18.2

Individual Designers Influencing Consumers' Taste



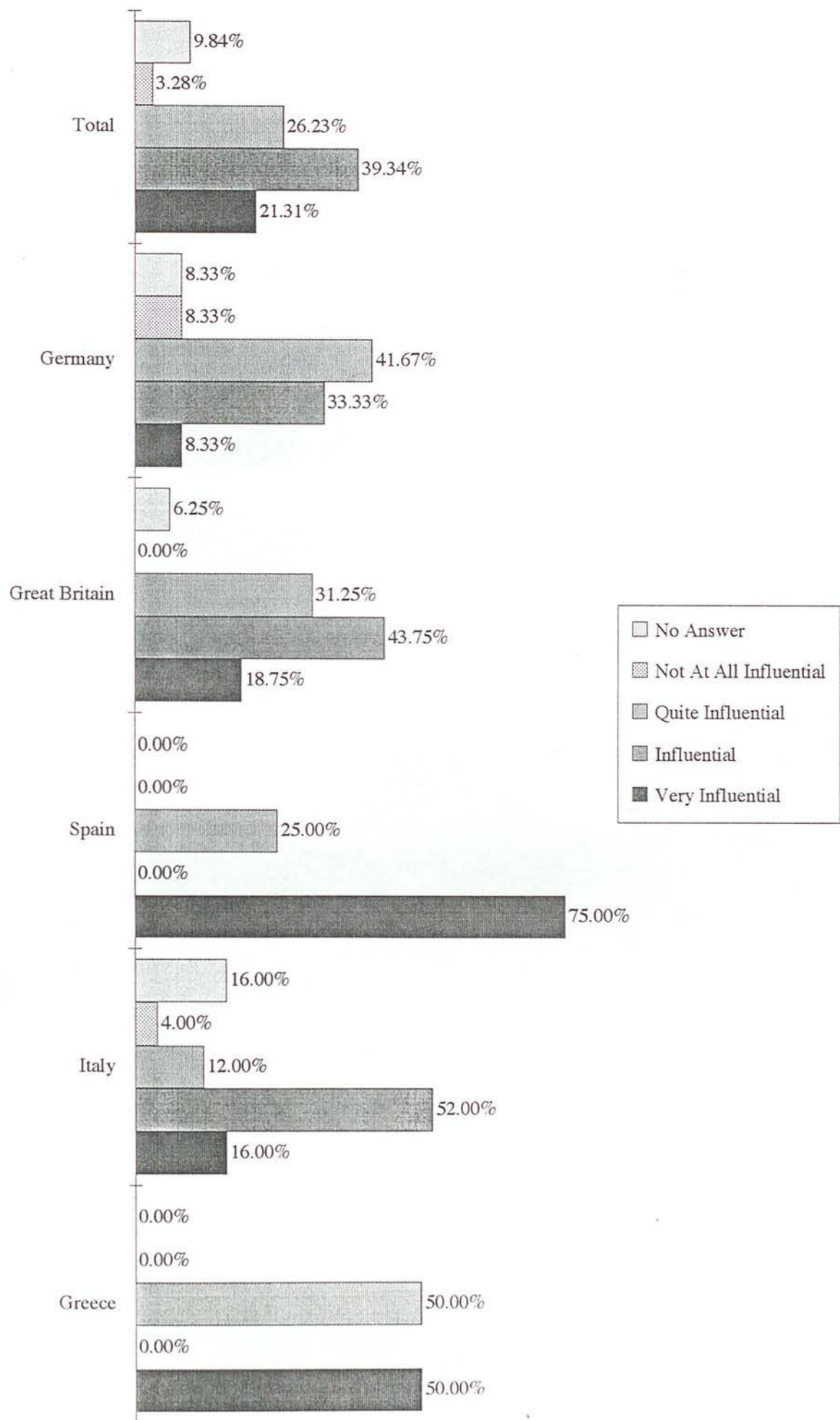


Chart.18.3

Fashion Influencing Consumers' Taste

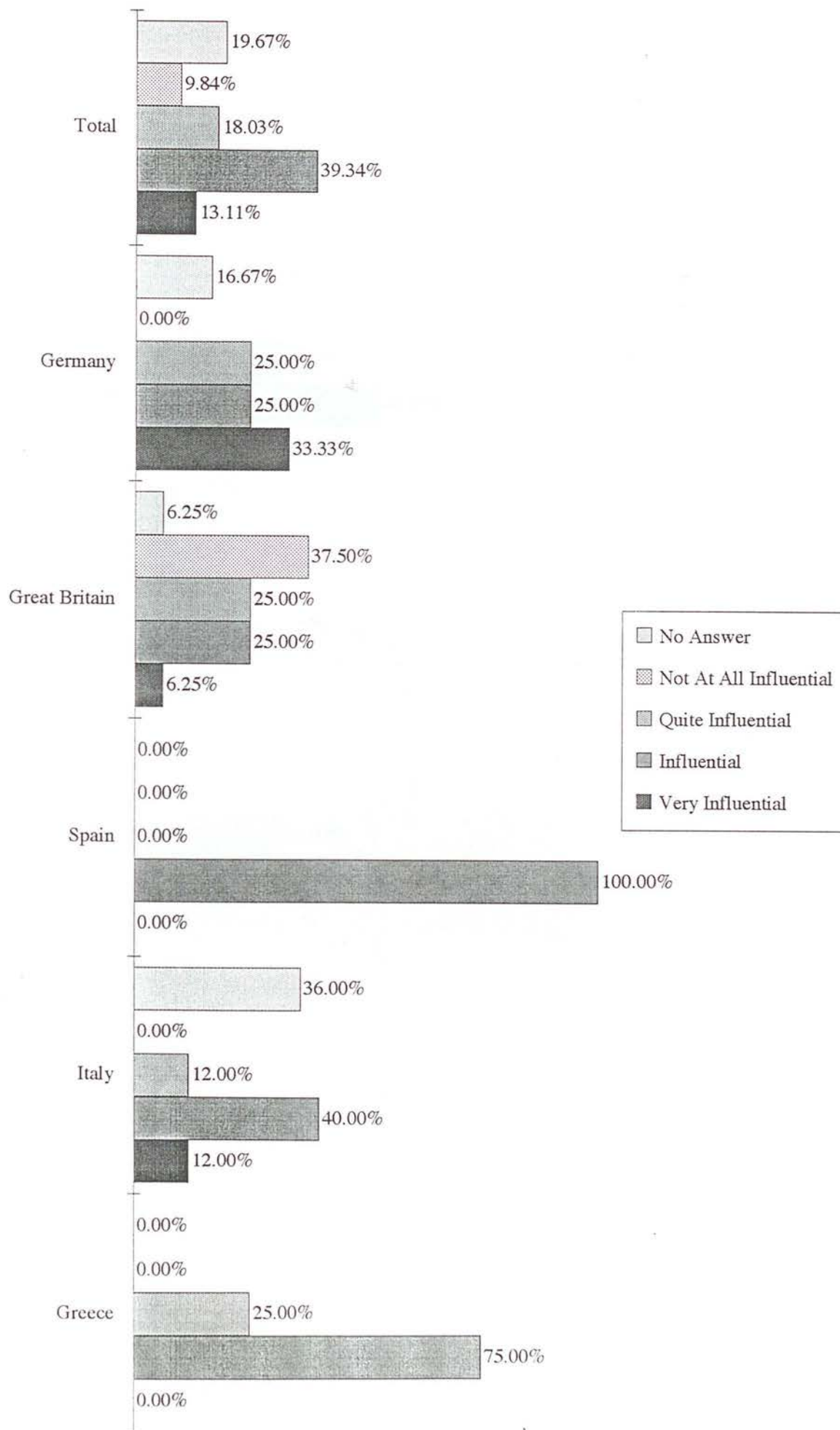


Chart.18.4

Class, Culture or Group Standards Influencing Consumers' Taste

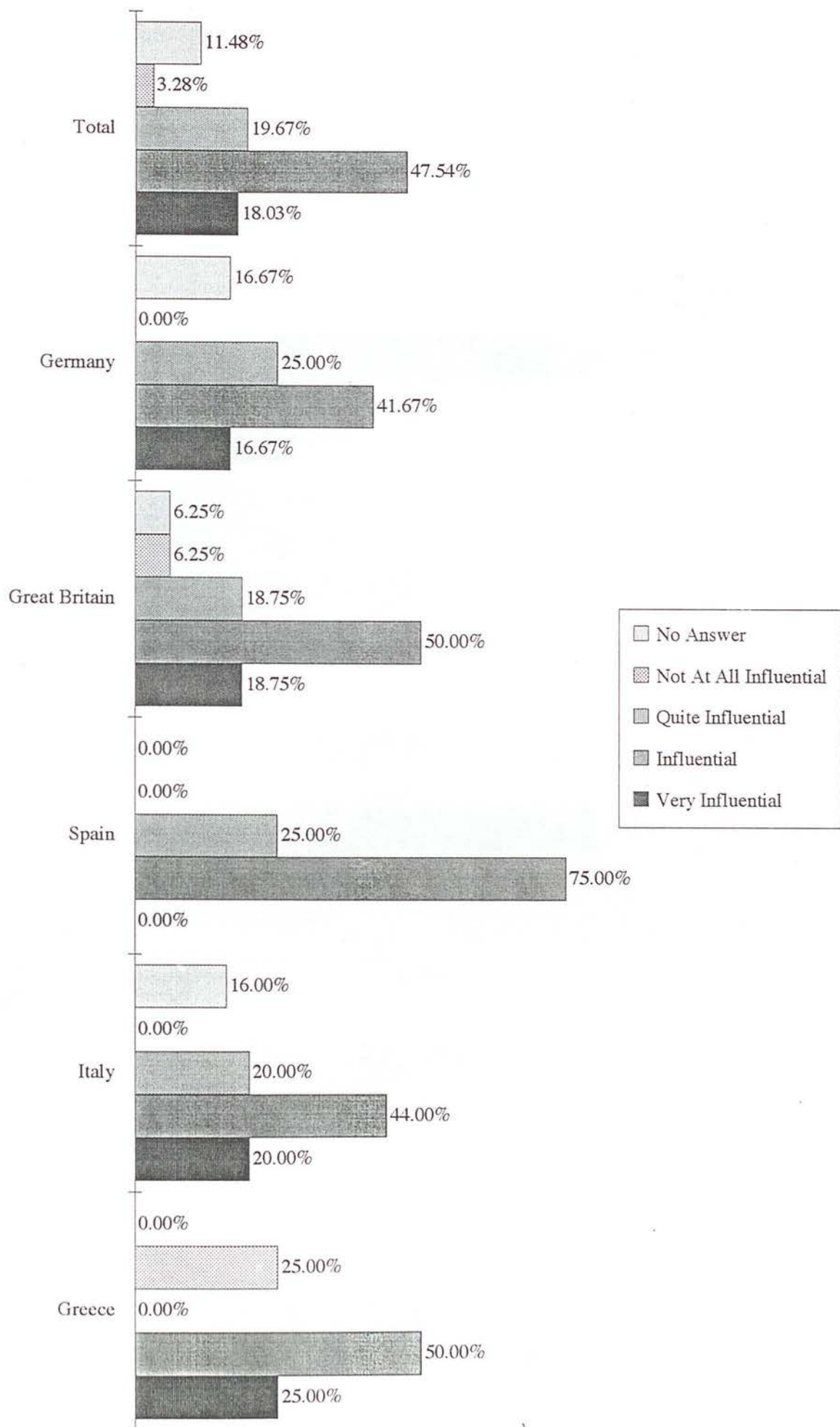


Chart.18.5

Change on Practical Needs Influencing Consumers' Taste



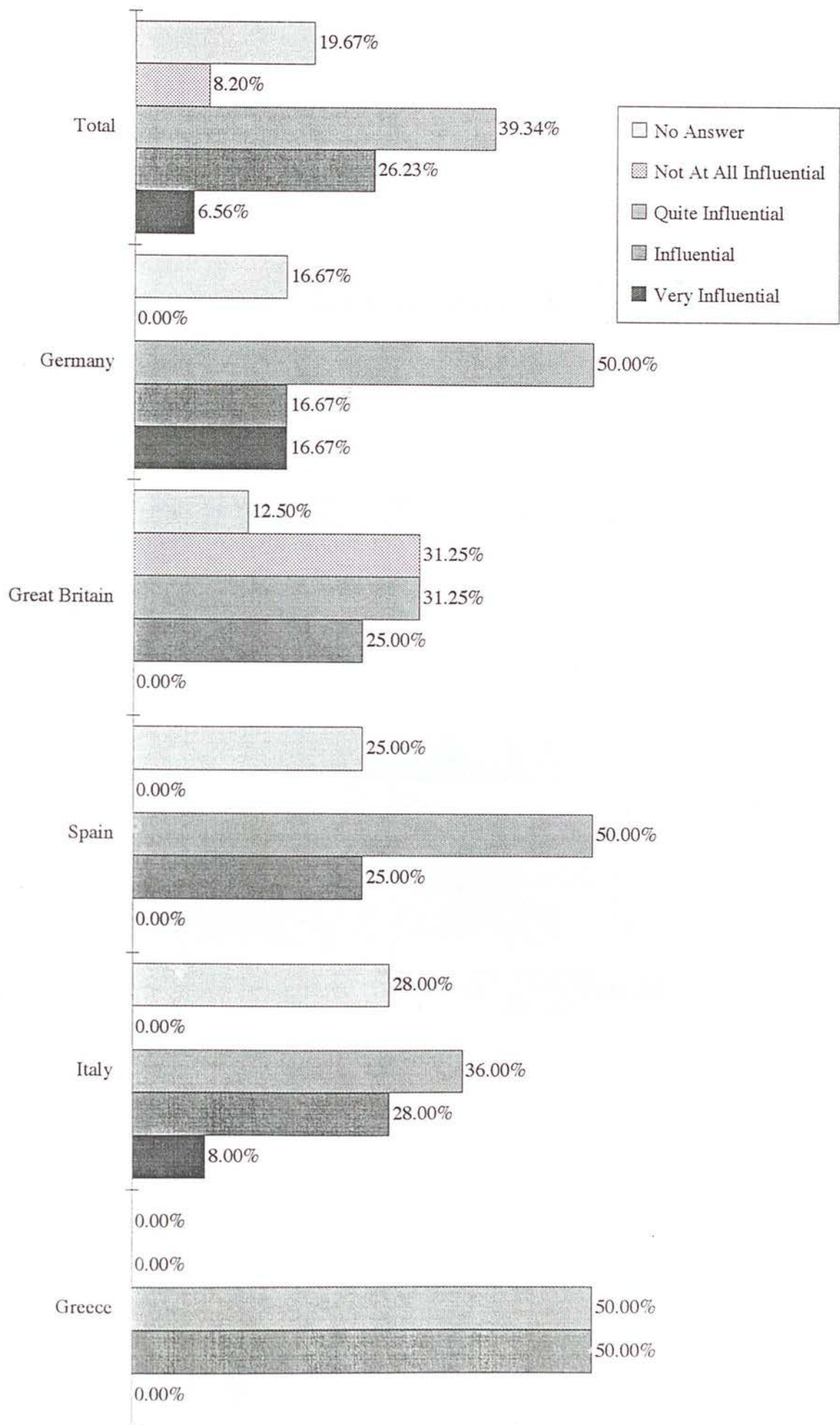


Chart.18.6 Change on Psychological Needs Influencing Consumers' Taste

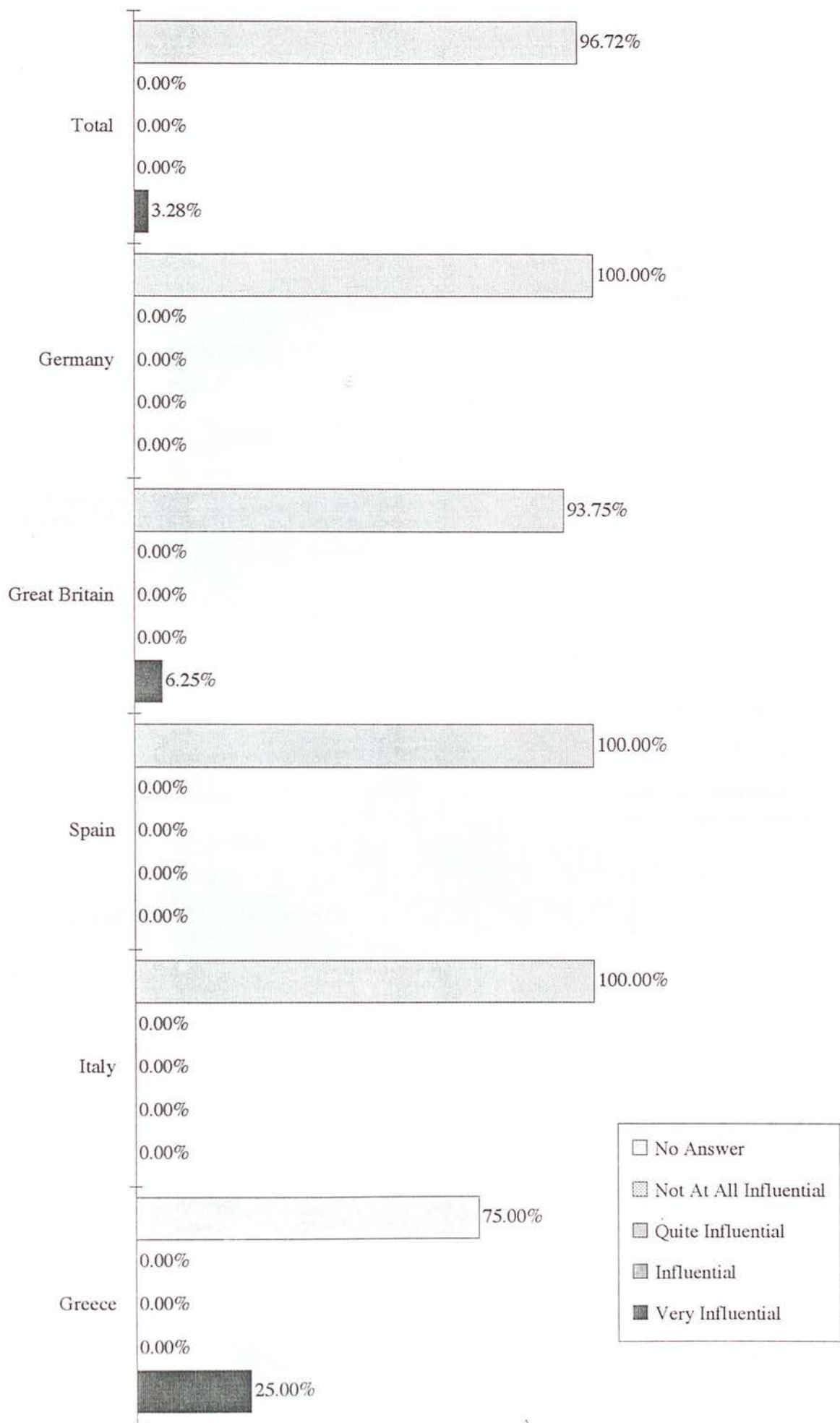


Chart.18.7

Other Factors Influencing Consumers' Taste

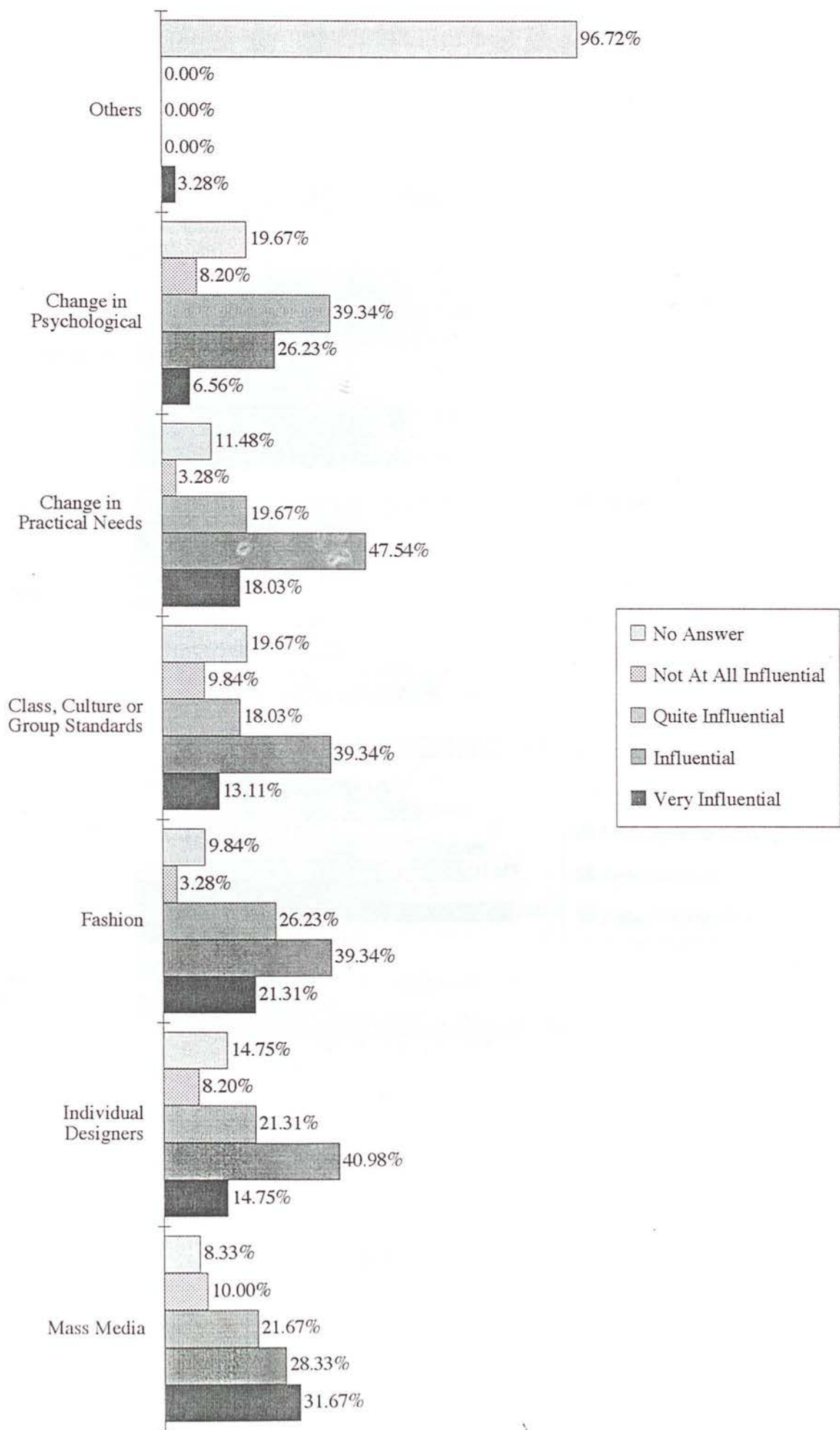


Chart.18.8

Factors Influencing Consumers' Taste



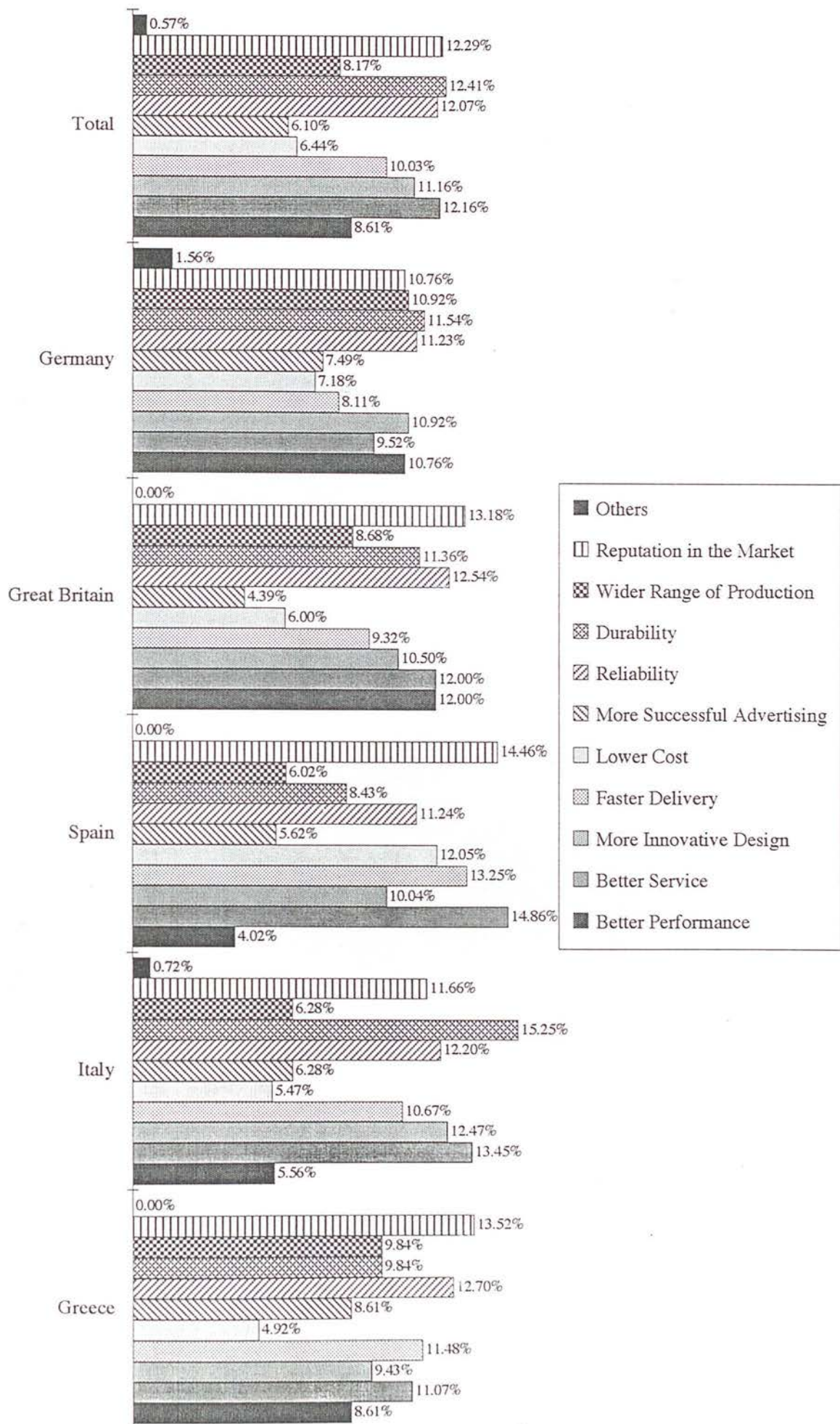


Chart.19

Importance of Factors in the Market

### III. QUESTIONNAIRE ON THE WORKING ENVIRONMENT AND THE USE OF FURNITURE IN BANKS

## SECTION A: POLICY OF THE BANK

1. Please indicate name and address of the Bank, as well as your name and position.

Name of the Bank	Address of the Bank
Your name and position	

2. a. Is there a special department in your Bank that has the responsibility for the design, construction and restoration of the buildings and branches of your bank? ☐ YES ☐ NO  
 b. What categories of employees constitute the above mentioned department?  
☐ Architects ☐ Civil engineers ☐ Mechanical engineers ☐ Interiors designers ☐ Furniture designers  
☐ Technicians ☐ Draughtsmen ☐ Quantity surveyors ☐ Estate surveyors ☐ Building supervisors  
☐ None ☐ Others (please specify)  
 c. Do you employ consultants, freelance designers, architects etc. for some of your projects? ☐ YES ☐ NO
3. Are the colours and the house style of your Bank, specified in a corporate identity manual? ☐ YES ☐ NO  
 If your answer is NO, state by whom they are specified:  
☐ Manager ☐ Designer ☐ Architect ☐ Consultant ☐ Advertiser  
 Which is the colour, or colours of your logo? (Please specify and/or send a sample)
4. To what extent, in your opinion, does the design of the working environment:  
 a. affect the decision of bank customers to deal with your Bank?  
☐ To a very great extent ☐ To a great extent ☐ To some extent ☐ Not at all  
 b. express and advertise the image and the character of a financial organization?  
☐ To a very great extent ☐ To a great extent ☐ To some extent ☐ Not at all
5. Do you have a broad policy regarding:  
 a. the design and the style of the exterior (facades) of all your branches? ☐ YES ☐ NO  
 b. the design and the style of the interiors of all your branches? ☐ YES ☐ NO  
 c. the arrangement of services within the working areas of all your branches? ☐ YES ☐ NO  
 As a result of the above policy, do you have common rules regarding the above? ☐ YES ☐ NO
6. Do you develop the design and the style of your branches in relation to:  
 a. the area they serve ☐ YES ☐ NO  
 b. the cultural context of the clients ☐ YES ☐ NO

## SECTION B: THE WORKING ENVIRONMENT OF THE BANK

7. To what extent are the following factors important for a pleasant working environment: a. for employees and b. for clients, according to the broad philosophical notions of your Bank?
- | for:            | To a very great extent<br>employees | To a very great extent<br>clients | To a great extent<br>employees | To a great extent<br>clients | To some extent<br>employees | To some extent<br>clients | Not at all<br>employees | Not at all<br>clients |
|-----------------|-------------------------------------|-----------------------------------|--------------------------------|------------------------------|-----------------------------|---------------------------|-------------------------|-----------------------|
| Colours         | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
| Music           | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
| Comfort         | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
| Luxury          | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
| Furnishings     | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
| Plenty of space | <input type="text"/>                | <input type="text"/>              | <input type="text"/>           | <input type="text"/>         | <input type="text"/>        | <input type="text"/>      | <input type="text"/>    | <input type="text"/>  |
8. To what extent should the following concepts be expressed by the working environment of a bank according to the broad philosophical notions of your Bank?
- |              | To a very great extent | To a great extent    | To some extent       | Not at all           |
|--------------|------------------------|----------------------|----------------------|----------------------|
| Friendliness | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Austerity    | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Sobriety     | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Authority    | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Rationality  | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Stability    | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Flexibility  | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/> |



Impersonality	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Independence	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Individuality	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Openness	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Consistency	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Affluence	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Comfort	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

9. Please characterize, by ticking one of the nine steps of each scale, the working environment of an average branch of your Bank.

simple	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	complex											passive	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	active										
rational	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	intuitive											unique	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	common										
ambiguous	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	clear											exciting	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	calming										
plain	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	ornate											interesting	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	boring										
confined	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	spacious											open	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	closed										
permanent	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	temporary											chaotic	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	ordered										
uncomfortable	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	comfortable											tight	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	loose										
straightforward	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	contradictory											considered	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	arbitrary										

Please indicate which of the following concepts are, in your opinion, reflected by your characterization?

<input type="checkbox"/> Friendliness	<input type="checkbox"/> Austerity	<input type="checkbox"/> Sobriety	<input type="checkbox"/> Authority	<input type="checkbox"/> Rationality	<input type="checkbox"/> Stability	<input type="checkbox"/> Flexibility
<input type="checkbox"/> Impersonality	<input type="checkbox"/> Independence	<input type="checkbox"/> Individuality	<input type="checkbox"/> Openness	<input type="checkbox"/> Consistency	<input type="checkbox"/> Affluence	<input type="checkbox"/> Comfort

10. Please indicate, by ticking one of the nine steps of each scale, the means by which you differentiate the working environment of employees of different hierarchical levels.

	Employees of high hierarchical level (managers)	Employees of low hierarchical level (clerks)
Space	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much
Space flexibility	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much
Privacy	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much
Luxury	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much
Comfort	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much	little 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 much
Furnishings	modern 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 traditional	modern 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 traditional
Technological means	few 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 many	few 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 many
Personal objects	few 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 many	few 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 many
Surroundings	austere 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 friendly	austere 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 friendly
Colours	<input type="checkbox"/> dark <input type="checkbox"/> light <input type="checkbox"/> bright <input type="checkbox"/> pastel	<input type="checkbox"/> dark <input type="checkbox"/> light <input type="checkbox"/> bright <input type="checkbox"/> pastel

☐ There is no such differentiation.

11. Which of the following statements represent best your policy, as far as the design of the working environment is concerned?

<input type="checkbox"/> open space arrangement	<input type="checkbox"/> semi-private working areas	<input type="checkbox"/> private working areas
<input type="checkbox"/> service desks with glass protection	<input type="checkbox"/> service desks without glass protection	<input type="checkbox"/> low-height service desks
<input type="checkbox"/> smooth textures	<input type="checkbox"/> rough textures	<input type="checkbox"/> shiny surfaces
<input type="checkbox"/> comfortable armchairs in waiting areas	<input type="checkbox"/> writing desks for the clients	<input type="checkbox"/> readable signage

Please indicate which of the following concepts are, in your opinion, reflected by your policy?

<input type="checkbox"/> Friendliness	<input type="checkbox"/> Austerity	<input type="checkbox"/> Sobriety	<input type="checkbox"/> Authority	<input type="checkbox"/> Rationality	<input type="checkbox"/> Stability	<input type="checkbox"/> Flexibility
<input type="checkbox"/> Impersonality	<input type="checkbox"/> Independence	<input type="checkbox"/> Individuality	<input type="checkbox"/> Openness	<input type="checkbox"/> Consistency	<input type="checkbox"/> Affluence	<input type="checkbox"/> Comfort

12. Which colour ranges do you usually choose for the working environment and the furniture of your Bank?

Red: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright red	<input type="checkbox"/> Pastel colours related to red
Yellow: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright yellow	<input type="checkbox"/> Pastel colours related to yellow
Blue: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright blue	<input type="checkbox"/> Pastel colours related to blue
Green: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright green	<input type="checkbox"/> Pastel colours related to green
Purple: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright purple	<input type="checkbox"/> Pastel colours related to purple
Orange: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Bright orange	<input type="checkbox"/> Pastel colours related to orange
Brown: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> Black	<input type="checkbox"/> Nearly black
Grey: Dark 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5 Light	<input type="checkbox"/> White	<input type="checkbox"/> Nearly white

Please indicate which of the following concepts are, in your opinion, reflected by your characterization?

<input type="checkbox"/> Friendliness	<input type="checkbox"/> Austerity	<input type="checkbox"/> Sobriety	<input type="checkbox"/> Authority	<input type="checkbox"/> Rationality	<input type="checkbox"/> Stability	<input type="checkbox"/> Flexibility
<input type="checkbox"/> Impersonality	<input type="checkbox"/> Independence	<input type="checkbox"/> Individuality	<input type="checkbox"/> Openness	<input type="checkbox"/> Consistency	<input type="checkbox"/> Affluence	<input type="checkbox"/> Comfort

13. What changes, if any, were made in the arrangement of the working environment when computer terminals were introduced?

<input type="checkbox"/> Need for more space per individual employee	<input type="checkbox"/> Need for more privacy for individual employees
<input type="checkbox"/> Essential change in the arrangement of services	<input type="checkbox"/> Essential change in the design and form of service desks
<input type="checkbox"/> Need for use of specific materials in the construction of furnishings, in floor covering, e.t.c.	<input type="checkbox"/> None



## SECTION C: OFFICE FURNITURE AND EQUIPMENT

14. What is your opinion about the present office furniture and equipment on the market? Please tick one of the nine steps of each scale.

Quality of construction	poor	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	high
Cost	low	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	high
Aesthetic qualities	poor	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	high
Durability	little	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	much
Flexibility	little	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	much
Servicing	bad	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	good
Innovation	poor	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	high
Functional principles	poor	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	high
Comfort	little	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	much

15. Which of the following statements represent best your policy as far as the office furniture equipment of your Bank is concerned?

- ☐ you order large quantities of furniture and equipment, so you can use them from stock  
☐ you order each time in accordance with your present needs  
☐ you have a permanent supplier of furniture and equipment  
☐ you buy whatever is available on the market according to the designer's suggestions  
☐ the furniture is designed in house and made by local craftsmen

16. Please indicate by rating each one out of ten the factors that usually lead you to choose manufactured office furniture and equipment for your Bank.

<input type="checkbox"/> High performance	<input type="checkbox"/> Good service	<input type="checkbox"/> Innovative design	<input type="checkbox"/> Fast delivery
<input type="checkbox"/> Low cost	<input type="checkbox"/> Successful advertising	<input type="checkbox"/> Manufacturers' reliability	<input type="checkbox"/> Durability
<input type="checkbox"/> Green policy	<input type="checkbox"/> Wide range of production	<input type="checkbox"/> Others (please specify)	

17. To what extent are the following materials used in the interior design and furniture of your Bank?

	To a very great extent	To a great extent	To some extent	Not at all
Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aluminium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other metals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laminates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fabrics, upholstery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plastics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Please indicate, which of the indicated materials are, in your opinion, related the following concepts?

	Steel	Aluminium	Other metals	Wood	Laminates	Leather	Fabrics	Plastics	Glass
Friendliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Austerity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rationality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Individuality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Affluence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comfort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Durability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Which of the following characteristics represent best the form and the design of the furniture and equipment of your branches?

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Combination of materials | <input type="checkbox"/> Limited number of materials | <input type="checkbox"/> Rounded shapes     | <input type="checkbox"/> Sharp edged shapes    |
| <input type="checkbox"/> Simple forms and design  | <input type="checkbox"/> Complex forms and design    | <input type="checkbox"/> Symbolic forms     | <input type="checkbox"/> Technological effects |
| <input type="checkbox"/> Minimised dimensions     | <input type="checkbox"/> Maximised dimensions        | <input type="checkbox"/> Smooth textures    | <input type="checkbox"/> Rough textures        |
| <input type="checkbox"/> Shiny surfaces           | <input type="checkbox"/> Matt surfaces               | <input type="checkbox"/> High tech          | <input type="checkbox"/> Low tech              |
| <input type="checkbox"/> Futuristic               | <input type="checkbox"/> Sophisticated               | <input type="checkbox"/> Light construction | <input type="checkbox"/> Heavy construction    |
| <input type="checkbox"/> Craftsmanship            | <input type="checkbox"/> Others (please specify)     |   |  |

- Please indicate which of the following concepts are, in your opinion, reflected by your characterization?
- |  |                                       |  |                                    |                                      |                                    |                                      |
|--|---------------------------------------|--|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|
| <input type="checkbox"/> Friendliness  | <input type="checkbox"/> Austerity    | <input type="checkbox"/> Sobriety      | <input type="checkbox"/> Authority | <input type="checkbox"/> Rationality | <input type="checkbox"/> Stability | <input type="checkbox"/> Flexibility |
| <input type="checkbox"/> Impersonality | <input type="checkbox"/> Independence | <input type="checkbox"/> Individuality | <input type="checkbox"/> Openness  | <input type="checkbox"/> Consistency | <input type="checkbox"/> Affluence | <input type="checkbox"/> Comfort     |

20. Please indicate if you would be willing to be of further assistance in the near future (e.g. additional correspondence or personal interview). ☐ YES ☐ NO

## LIST OF CHARTS

2.	(Question 2)	Design Departments in Banks and Categories of Employees.
3.	(Question 3)	Colours of the Bank's Logo.
4.1.	(Question 4)	The Extent to Which Design Affects Customers' Decision.
4.2.	(Question 4)	The Extent to Which Design Expresses a Financial Organisation's Character.
4.3.	(Question 4)	The Extent to Which Design Expresses Image and Affects Customers' Decision.
5.	(Question 5)	Broad Policy of the Bank Regarding Design.
6.	(Question 6)	Development of the Design Style of Branches.
7.1.	(Question 7)	Importance of Colours for a Pleasant Working Environment for the Employees.
7.2.	(Question 7)	Importance of Music for a Pleasant Working Environment for the Employees.
7.3.	(Question 7)	Importance of Comfort for a Pleasant Working Environment for the Employees.
7.4.	(Question 7)	Importance of Luxury for a Pleasant Working Environment for the Employees.
7.5.	(Question 7)	Importance of Furnishings for a Pleasant Working Environment for the Employees.
7.6.	(Question 7)	Importance of Space for a Pleasant Working Environment for the Employees.
7.7.	(Question 7)	Importance of Factors for a Pleasant Working Environment for the Employees.
7.8.	(Question 7)	Importance of Colours for a Pleasant Environment for



- the Clients.
- 7.9. (Question 7) Importance of Music for a Pleasant Environment for the Clients.
- 7.10. (Question 7) Importance of Comfort for a Pleasant Environment for the Clients.
- 7.11. (Question 7) Importance of Luxury for a Pleasant Environment for the Clients.
- 7.12. (Question 7) Importance of Furnishings for a Pleasant Environment for the Clients.
- 7.13. (Question 7) Importance of Space for a Pleasant Environment for the Clients.
- 7.14. (Question 7) Important Factors for a Pleasant Environment for the Clients.
- 8.1. (Question 8) The Extent to Which Friendliness should be Expressed by a Bank.
- 8.2. (Question 8) The Extent to Which Austerity should be Expressed by a Bank.
- 8.3. (Question 8) The Extent to Which Sobriety should be Expressed by a Bank.
- 8.4. (Question 8) The Extent to Which Authority should be Expressed by a Bank.
- 8.5. (Question 8) The Extent to Which Rationality should be Expressed by a Bank.
- 8.6. (Question 8) The Extent to Which Stability should be Expressed by a Bank.
- 8.7. (Question 8) The Extent to Which Flexibility should be Expressed by a Bank.
- 8.8. (Question 8) The Extent to Which Impersonality should be Expressed

- by a Bank.
- 8.9. (Question 8) The Extent to Which Independence should be Expressed by a Bank.
- 8.10. (Question 8) The Extent to Which Individuality should be Expressed by a Bank.
- 8.11. (Question 8) The Extent to Which Openness should be Expressed by a Bank.
- 8.12. (Question 8) The Extent to Which Consistency should be Expressed by a Bank.
- 8.13. (Question 8) The Extent to Which Affluence should be Expressed by a Bank.
- 8.14. (Question 8) The Extent to Which Comfort should be Expressed by a Bank.
- 8.15. (Question 8) The Extent to Which Concepts should be Expressed by a Bank.
- 9.1. (Question 9) The Working Environment of an Average Branch of a Bank in Greece.
- 9.2. (Question 9) The Working Environment of an Average Branch of a Bank in Italy.
- 9.3. (Question 9) The Working Environment of an Average Branch of a Bank in Spain.
- 9.4. (Question 9) The Working Environment of an Average Branch of a Bank in Britain.
- 9.5. (Question 9) The Working Environment of an Average Branch of a Bank in Germany.
- 9.6. (Question 9) The Working Environment of an Average Branch of a Bank.
- 9.7. (Question 9) Concepts Reflected by the Characterization about the

Working Environment.

- |       |               |  |
|-------|---------------|--|
| 10.1  | (Question 10) | Means to differentiate Hierarchical levels in Greek Banks.                   |
| 10.2  | (Question 10) | Means to differentiate Hierarchical levels in Italian Banks.                 |
| 10.3  | (Question 10) | Means to differentiate Hierarchical levels in Spanish Banks.                 |
| 10.4  | (Question 10) | Means to differentiate Hierarchical levels in British Banks.                 |
| 10.5  | (Question 10) | Means to differentiate Hierarchical levels in German Banks.                  |
| 10.6  | (Question 10) | Means to differentiate Hierarchical levels in Banks.                         |
| 11.1. | (Question 11) | Statements Representing the Policy about Working Areas.                      |
| 11.2. | (Question 11) | Concepts reflected by the Bank's the Policy about Working Areas.             |
| 12.1. | (Question 12) | Colour ranges used in Greek Banks.   |
| 12.2. | (Question 12) | Colour ranges used in Italian Banks.   |
| 12.3. | (Question 12) | Colour ranges used in Spanish Banks.   |
| 12.4. | (Question 12) | Colour ranges used in British Banks.   |
| 12.5. | (Question 12) | Colour ranges used in German Banks.  |
| 12.6. | (Question 12) | Colour ranges used in Banks.   |
| 12.7. | (Question 12) | Concepts reflected by the Characterization about Colours.                    |
| 13.   | (Question 13) | Changes in the Working Environment because of the Introduction of Computers. |
| 14.1. | (Question 14) | Office Furniture in Contemporary Market in Greece.                           |
| 14.2. | (Question 14) | Office Furniture in Contemporary Market in Italy.                            |
| 14.3. | (Question 14) | Office Furniture in Contemporary Market in Spain.                            |



14.4.	(Question 14)	Office Furniture in Contemporary Market in Britain.
14.5.	(Question 14)	Office Furniture in Contemporary Market in Germany.
15.	(Question 15)	Statements Representing Policy about Office Furniture Supplies.
16.	(Question 16)	Importance of Factors that lead to the Choice of Manufactured Furniture.
17.1.	(Question 17)	Steel Usage in the Design of Banks.
17.2.	(Question 17)	Aluminium Usage in the Design of Banks.
17.3.	(Question 17)	Other Metals' Usage in the Design of Banks.
17.4.	(Question 17)	Wood Usage in the Design of Banks.
17.5.	(Question 17)	Laminates Usage in the Design of Banks.
17.6.	(Question 17)	Leather Usage in the Design of Banks.
17.7.	(Question 17)	Fabrics and Upholstery Usage in the Design of Banks.
17.8.	(Question 17)	Plastics Usage in the Design of Banks.
17.9.	(Question 17)	Glass Usage in the Design of Banks.
17.10.	(Question 17)	Materials' Usage in the Design of Banks.
18.1.	(Question 18)	Materials Related to Friendliness.
18.2.	(Question 18)	Materials Related to Austerity.
18.3.	(Question 18)	Materials Related to Rationality.
18.4.	(Question 18)	Materials Related to Individuality.
18.5.	(Question 18)	Materials Related to Affluence.
18.6.	(Question 18)	Materials Related to Comfort.
18.7.	(Question 18)	Materials Related to Durability.
18.8.	(Question 18)	Materials Related to Concepts.
19.1.	(Question 19)	Characteristics Representing the Design of the Furniture of Branches.
19.2.	(Question 19)	Concepts Reflected by the Characterization about the Design of Furniture.

## ANALYSIS OF THE QUESTIONNAIRE : DIAGRAMS AND TABLES

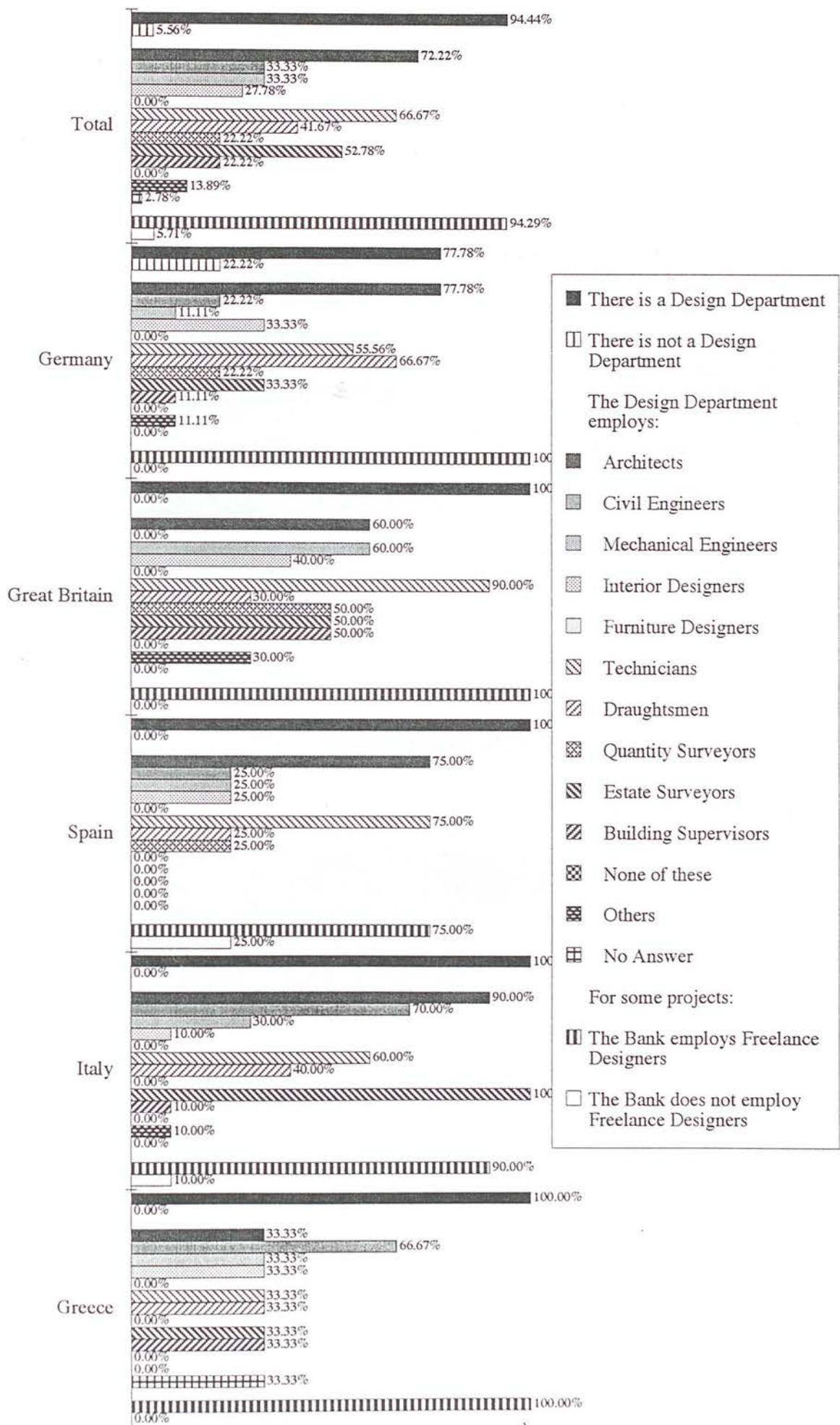


Chart.2

Design Departments in Banks and Categories of Employees



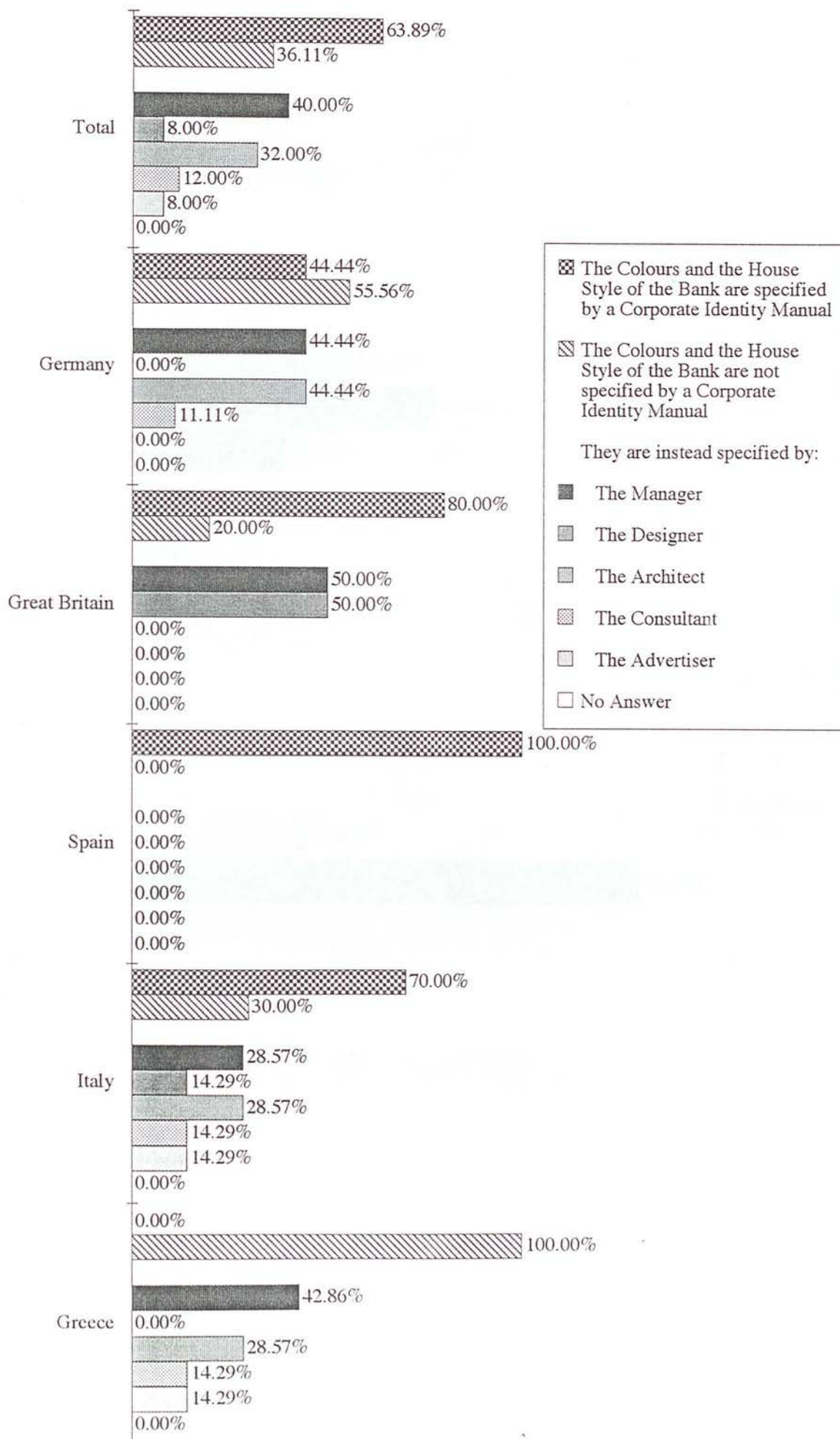


Chart.3

Colours of the Bank's Logo

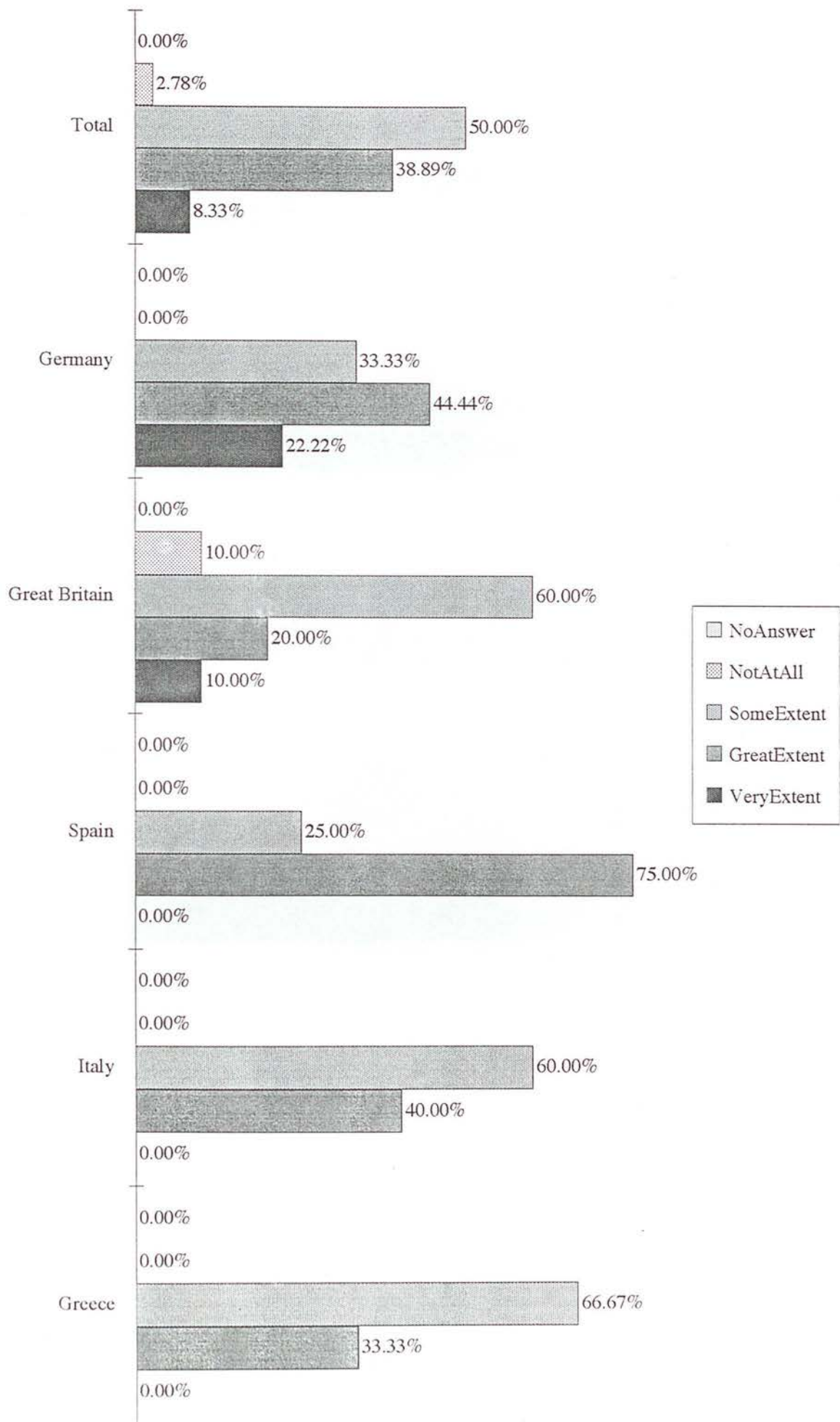


Chart.4.1

The Extent to which Design affects Customers' Decision

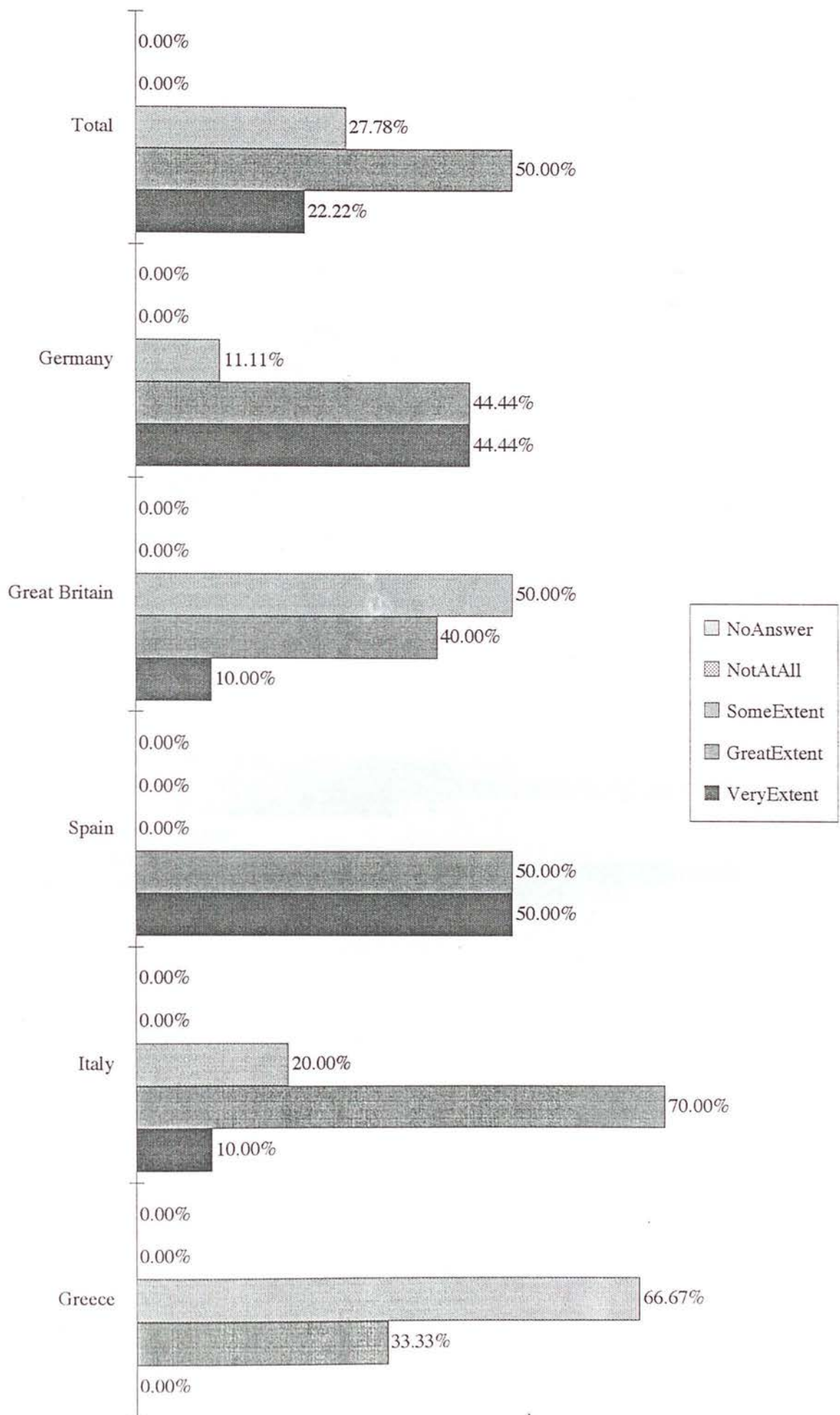


Chart.4.2 The Extent to which Design expresses a Financial Organisation's Character



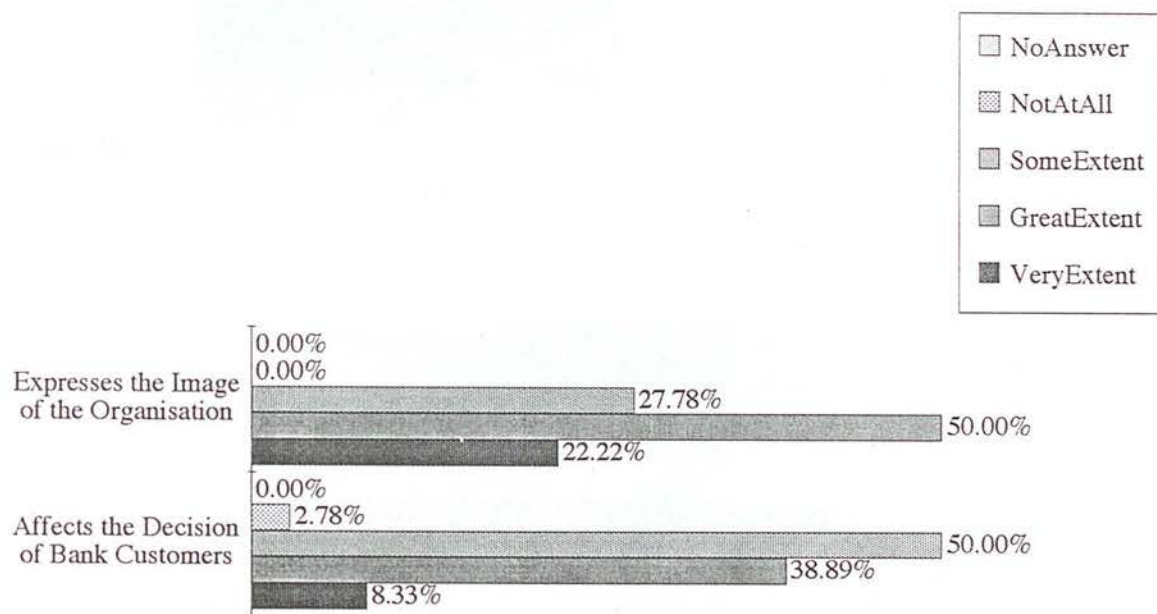


Chart.4.3 The Extent to which Design Expresses Image and Affects Bank Customers' Decision

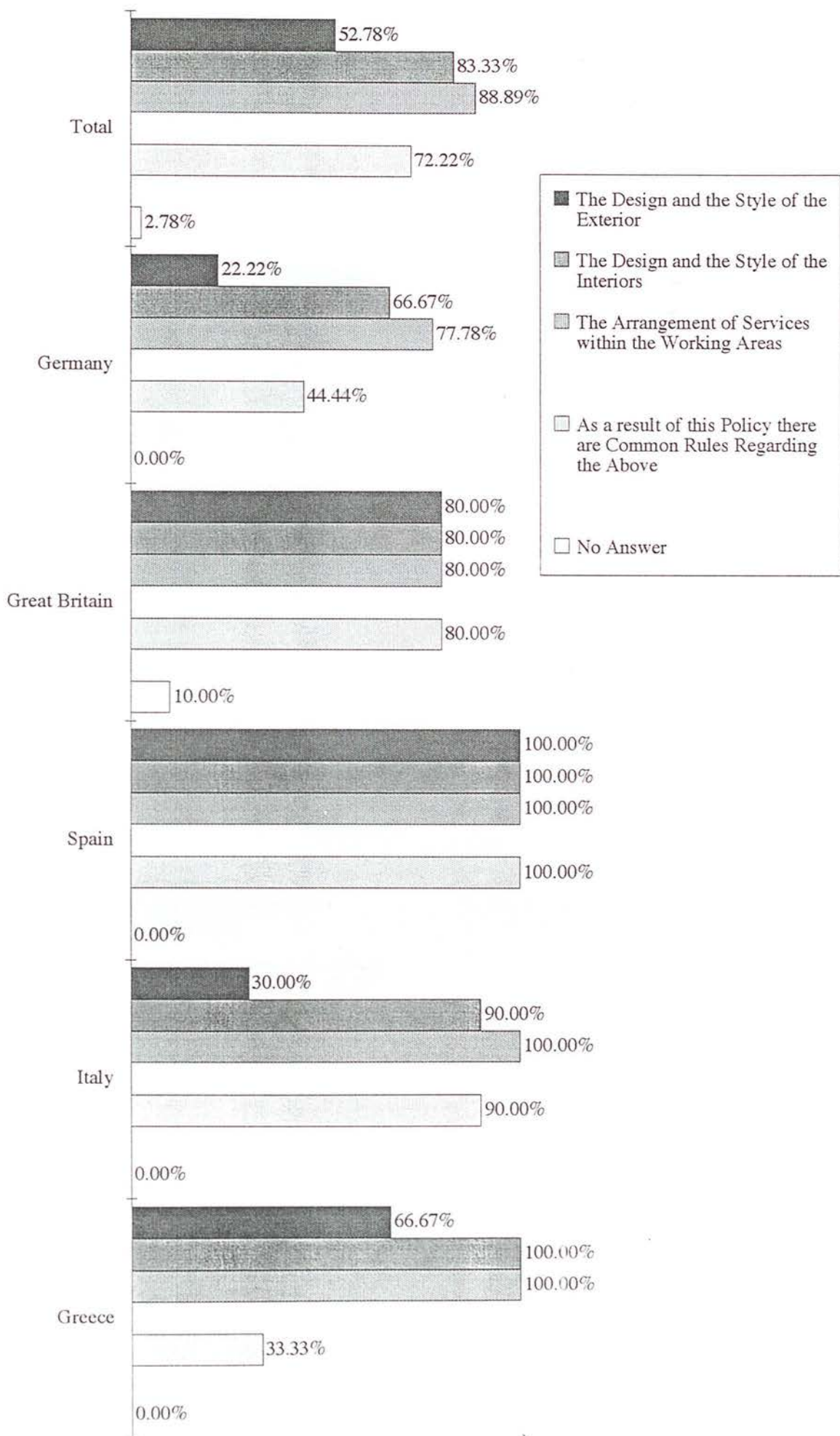


Chart.5

Broad Policy of the Bank Regarding Design

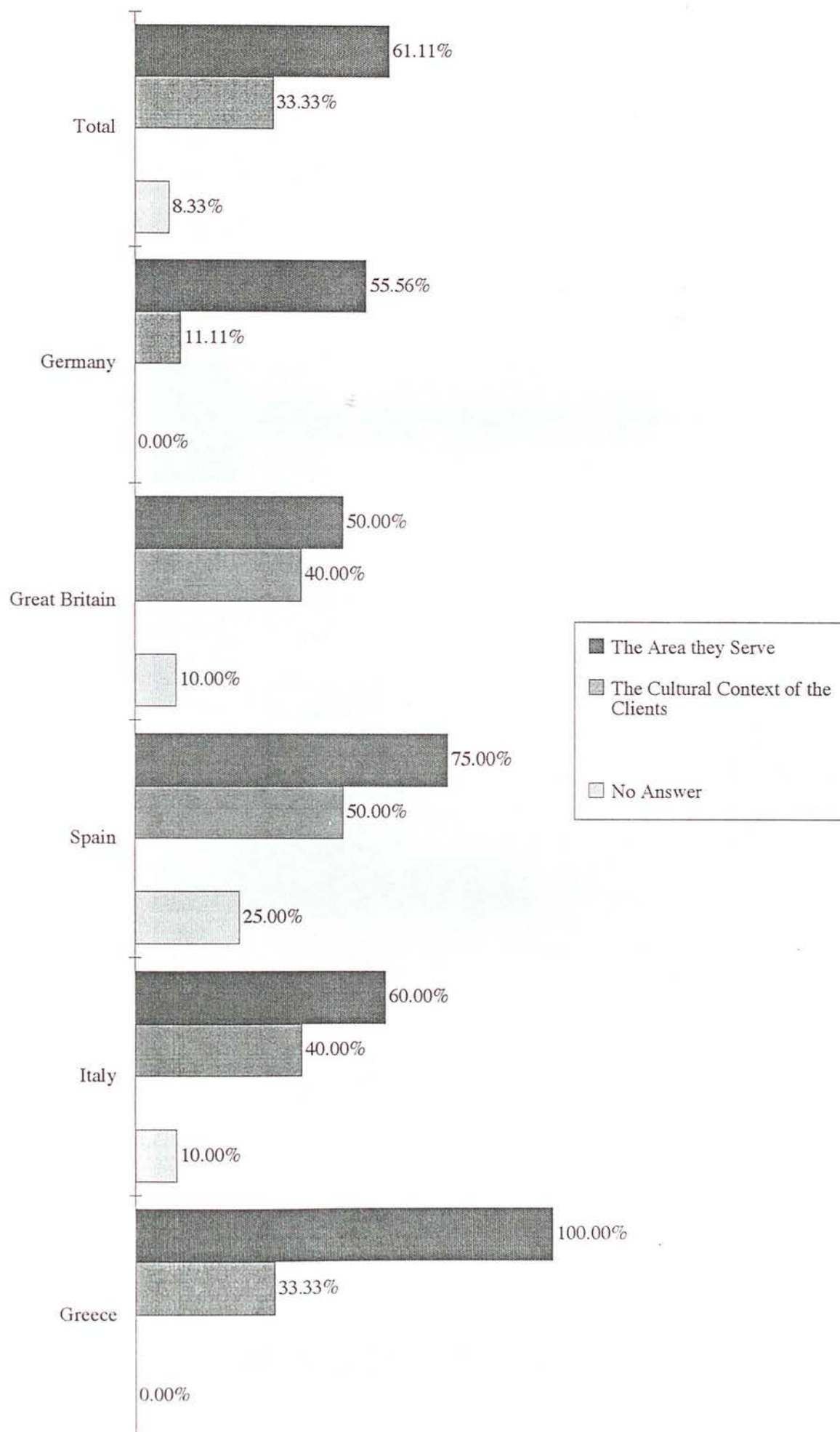


Chart.6

Development of the Design Style of Branches



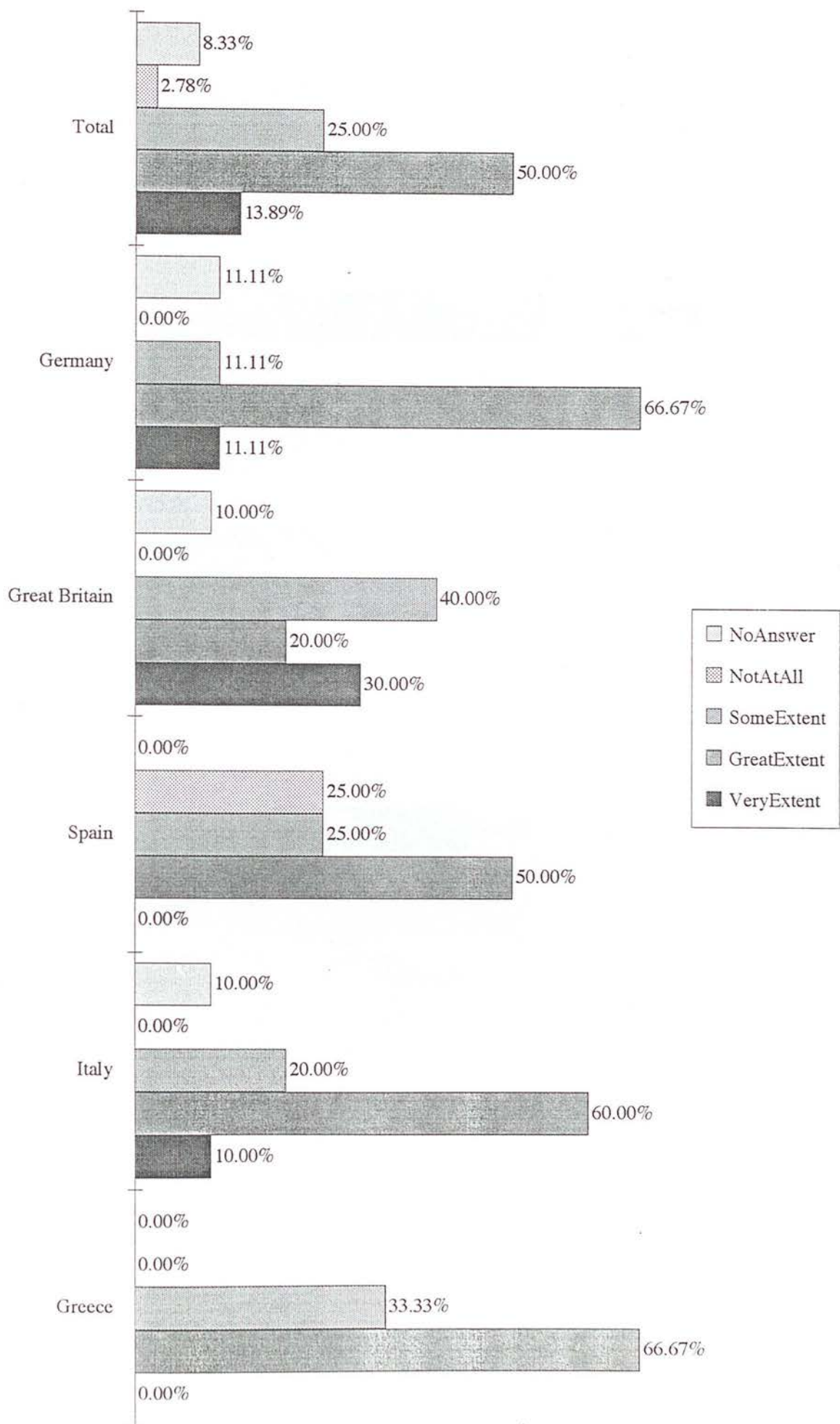


Chart.7.1 Importance of Colours for a Pleasant Working Environment for the Employees

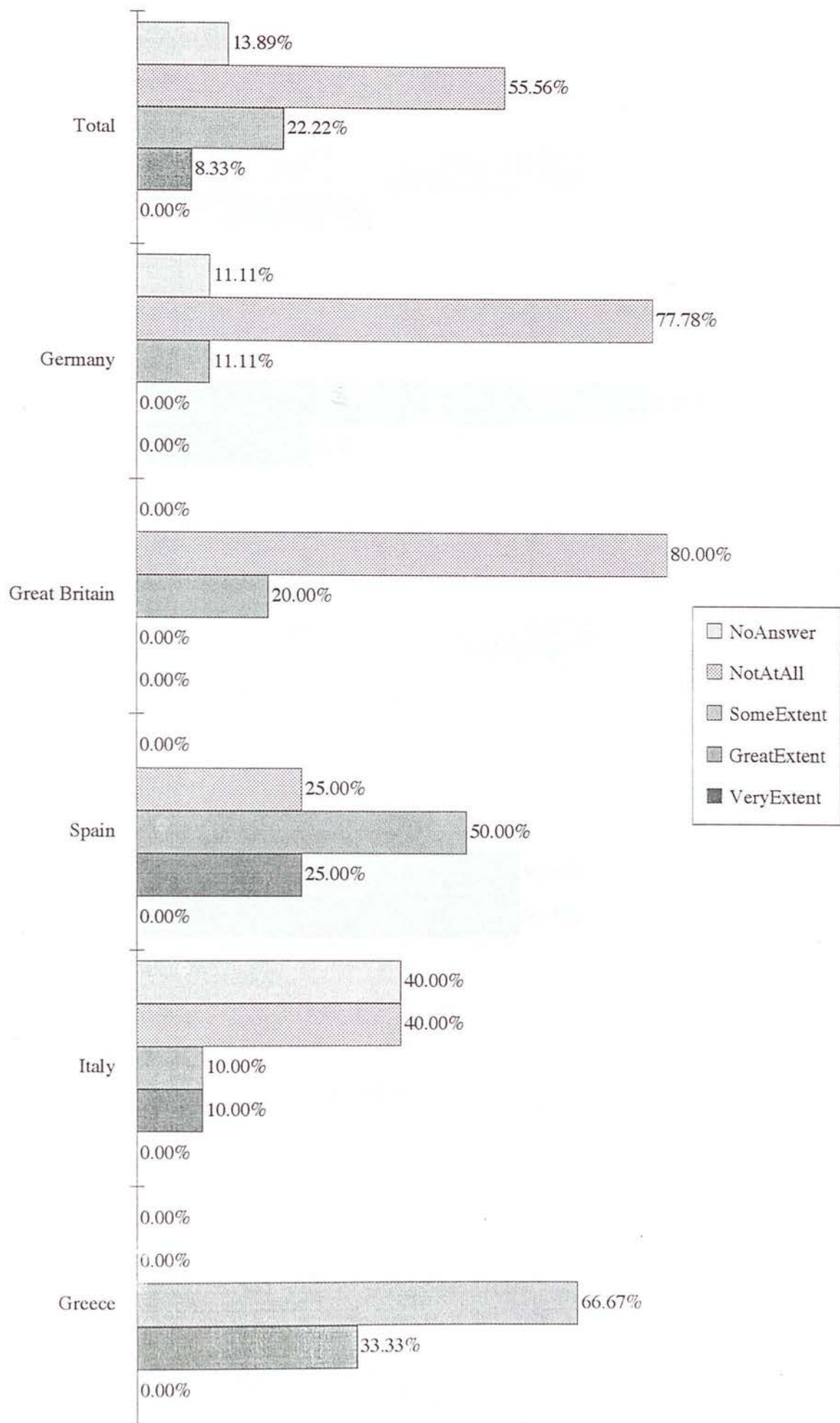


Chart.7.2 Importance of Music for a Pleasant Working Environment for the Employees

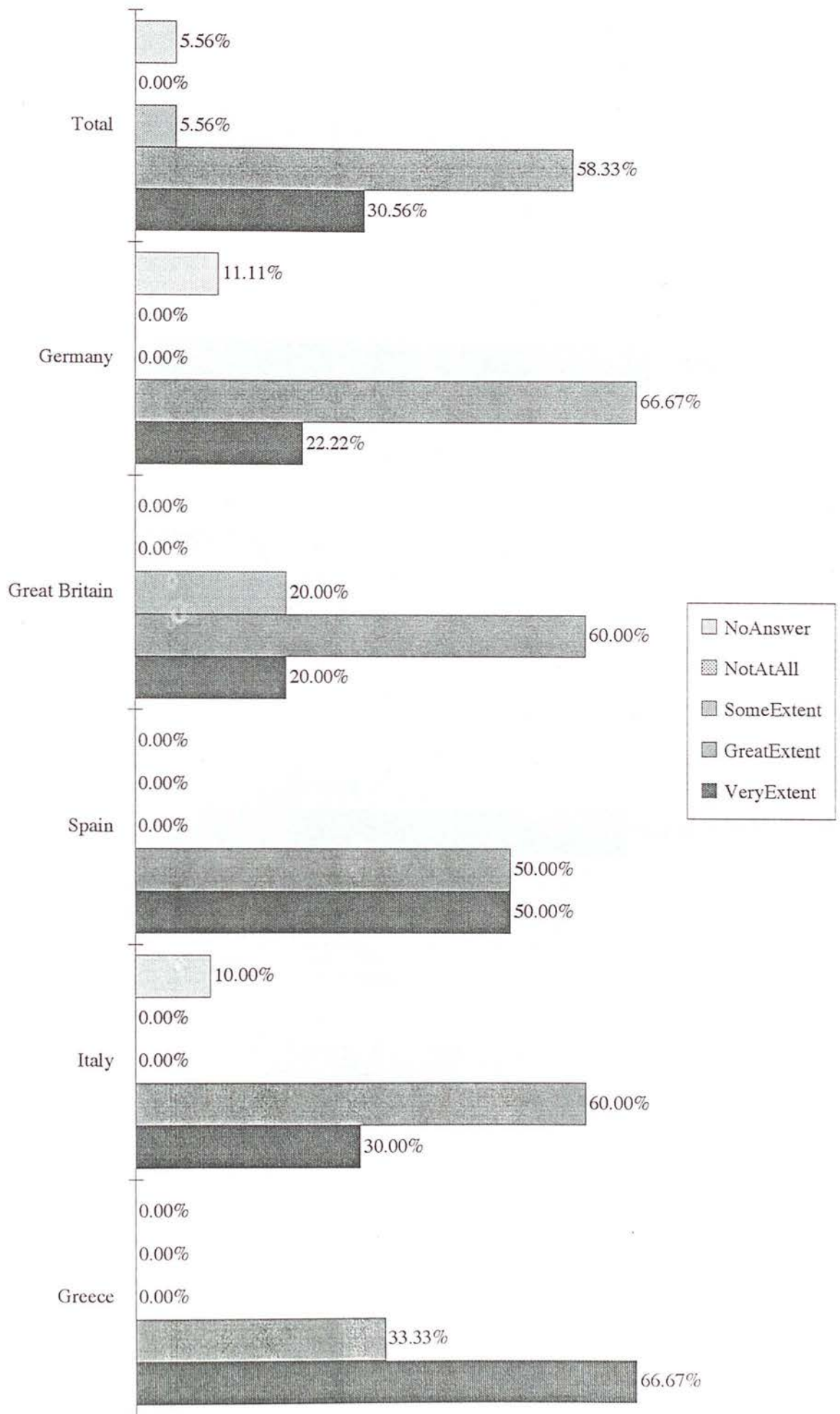


Chart.7.3 Importance of Comfort for a Pleasant Working Environment for the Employees



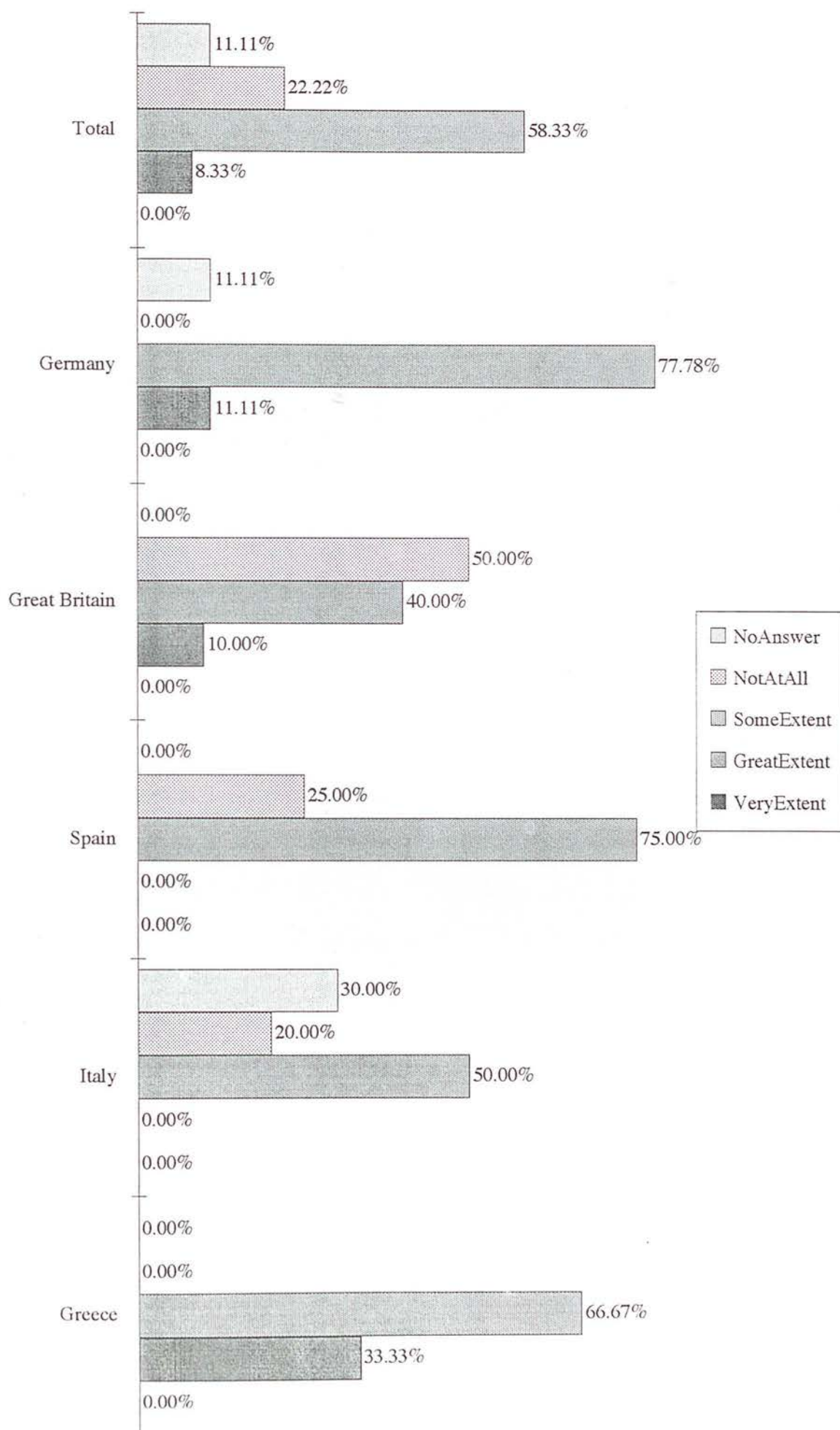


Chart.7.4 Importance of Luxury for a Pleasant Working Environment for the Employees

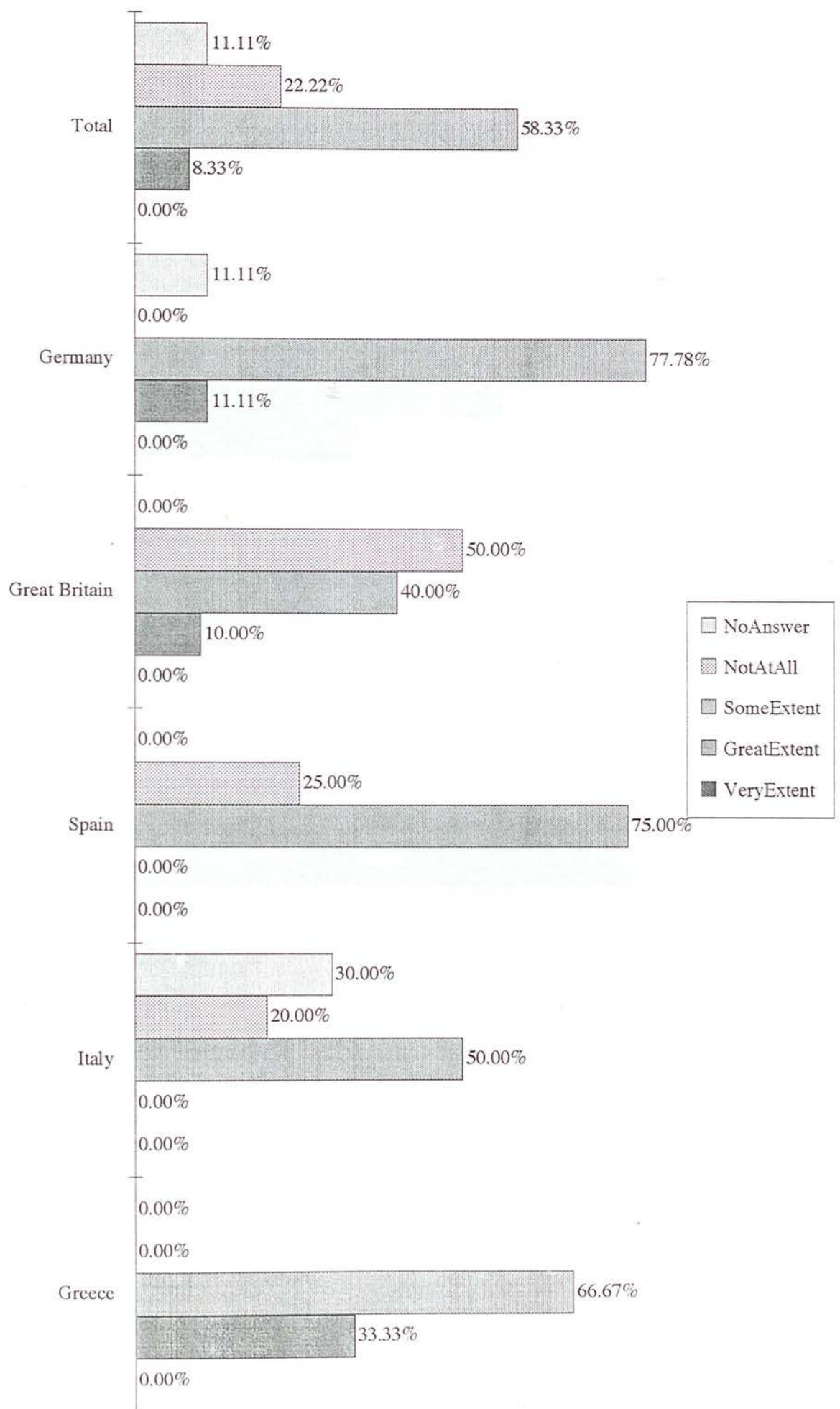


Chart.7.4 Importance of Luxury for a Pleasant Working Environment for the Employees

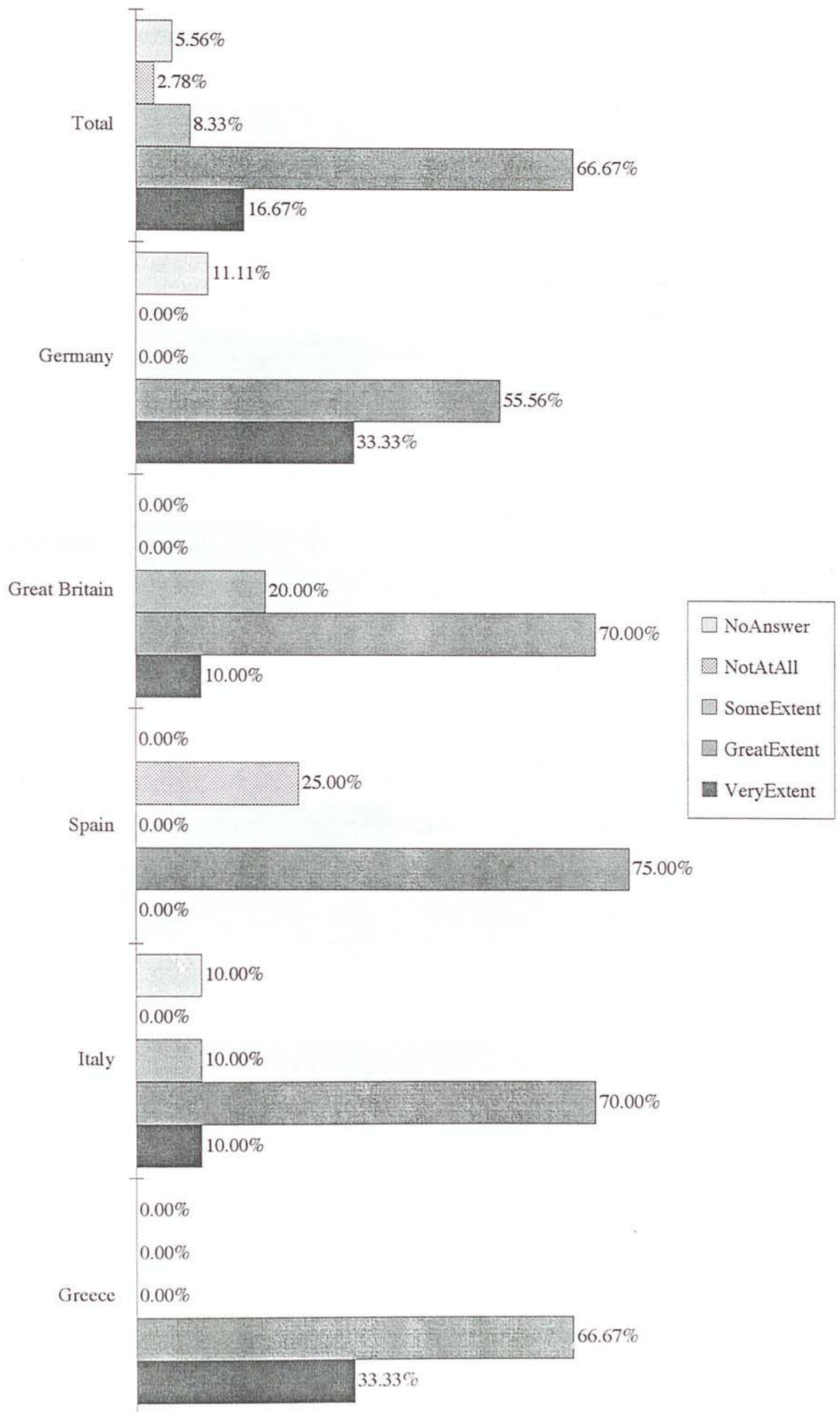


Chart.7.5Importance of Furnishings for a Pleasant Working Environment for the Employees



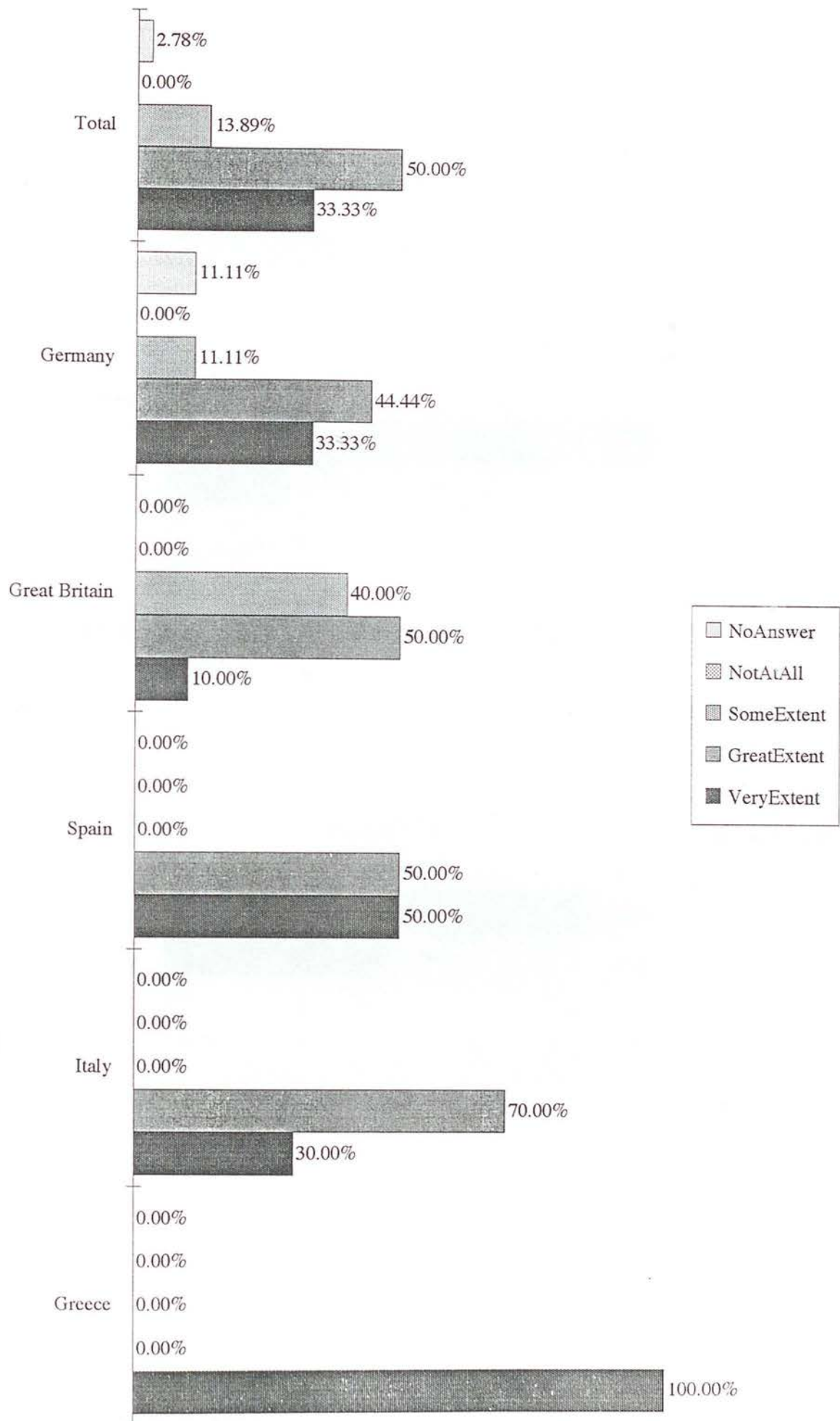


Chart.7.6 Importance of Space for a Pleasant Working Environment for the Employees

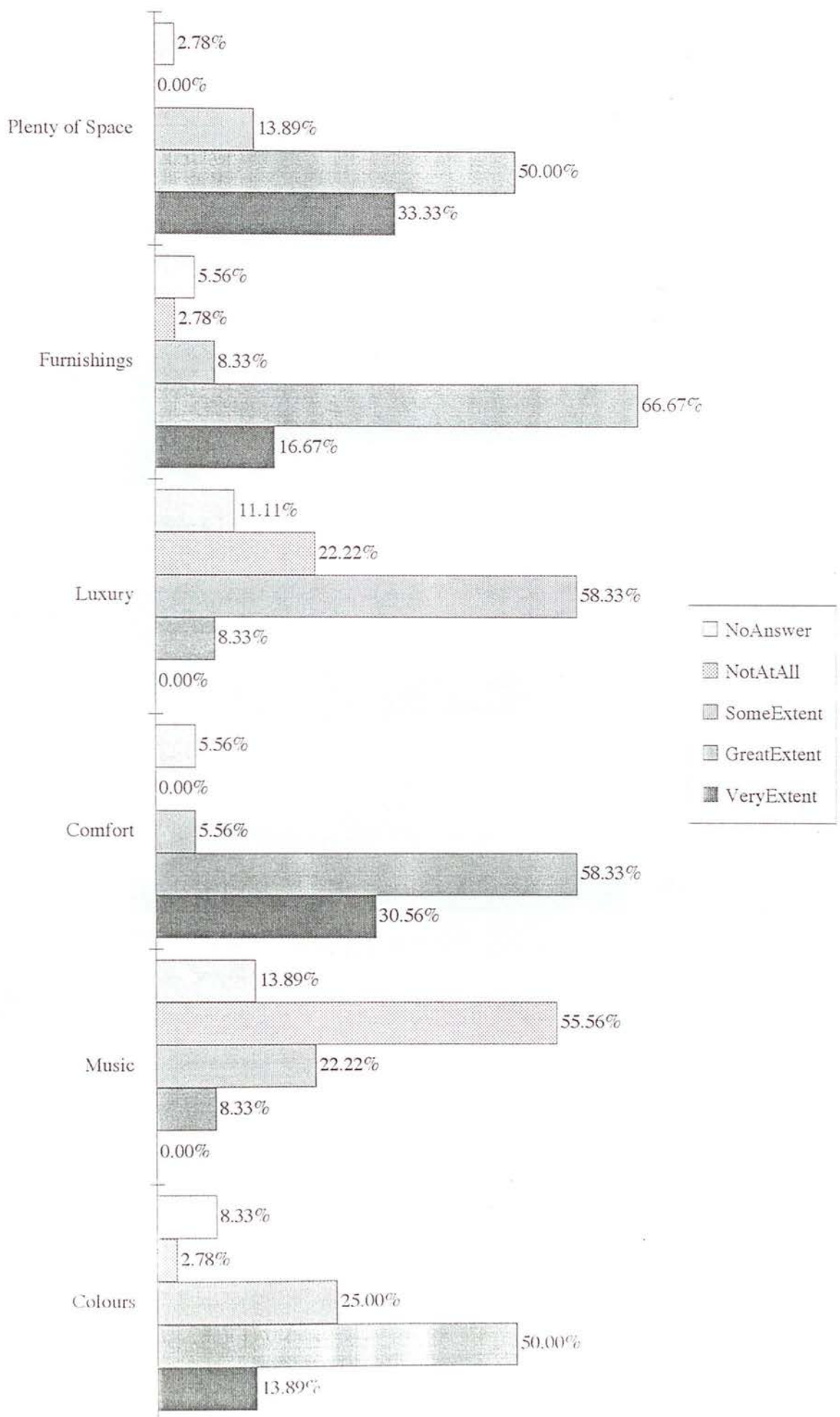


Chart.7.7 Importance of Factors for Pleasant Working Environment for the Employees

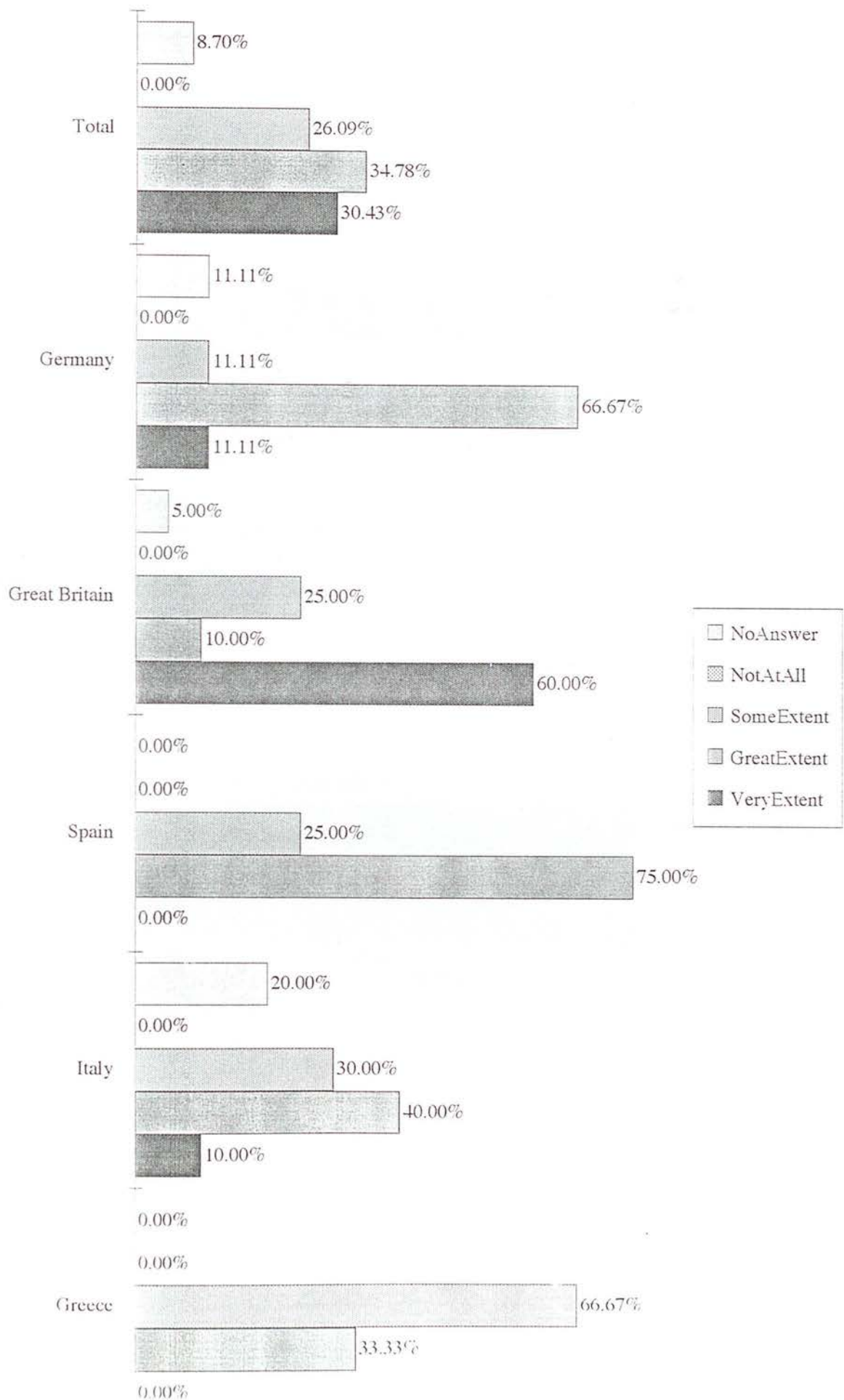


Chart 7.38

Importance of Colours for a Pleasant Environment for the Clients



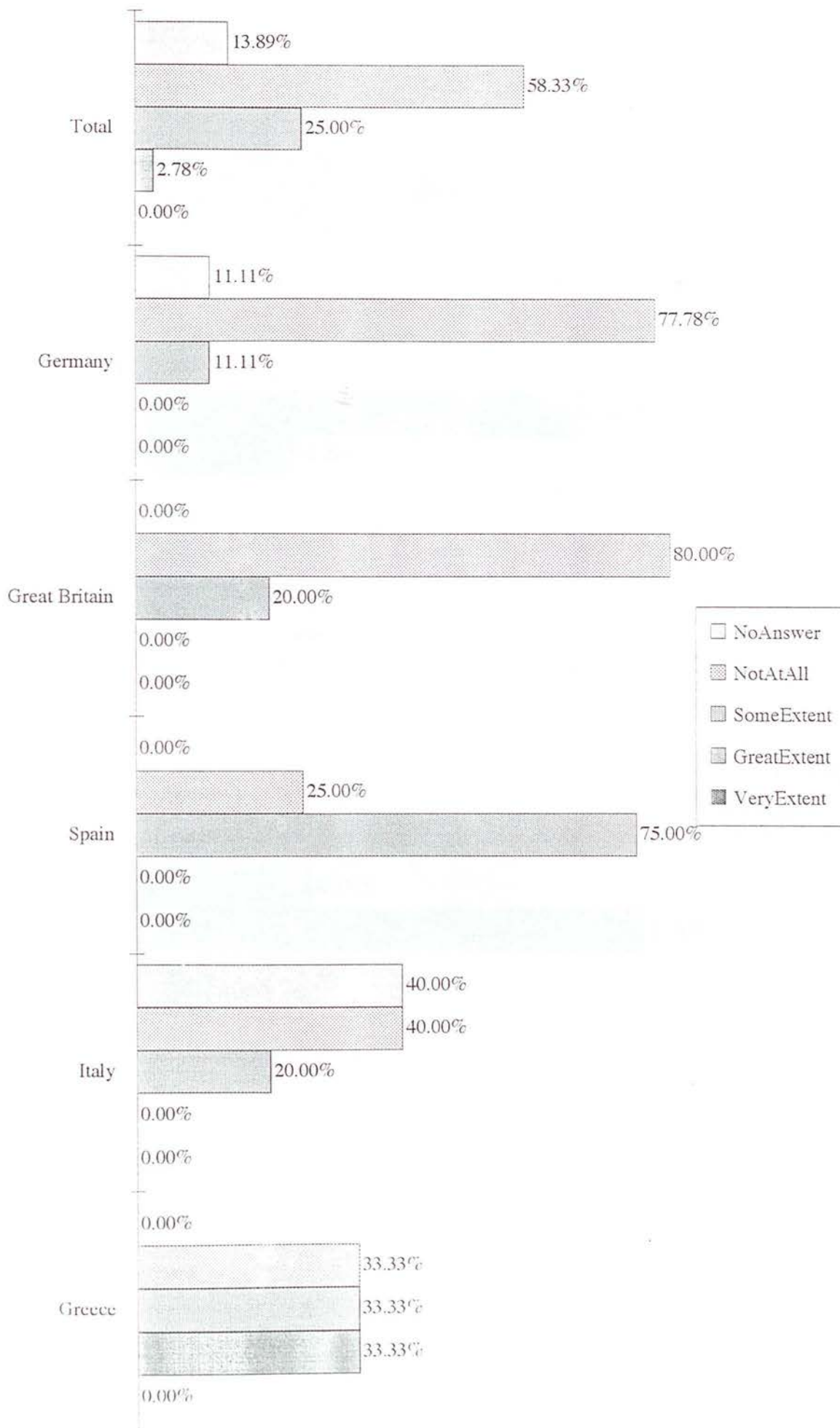


Chart.7.9

Importance of Music for a Pleasant Environment for the Clients

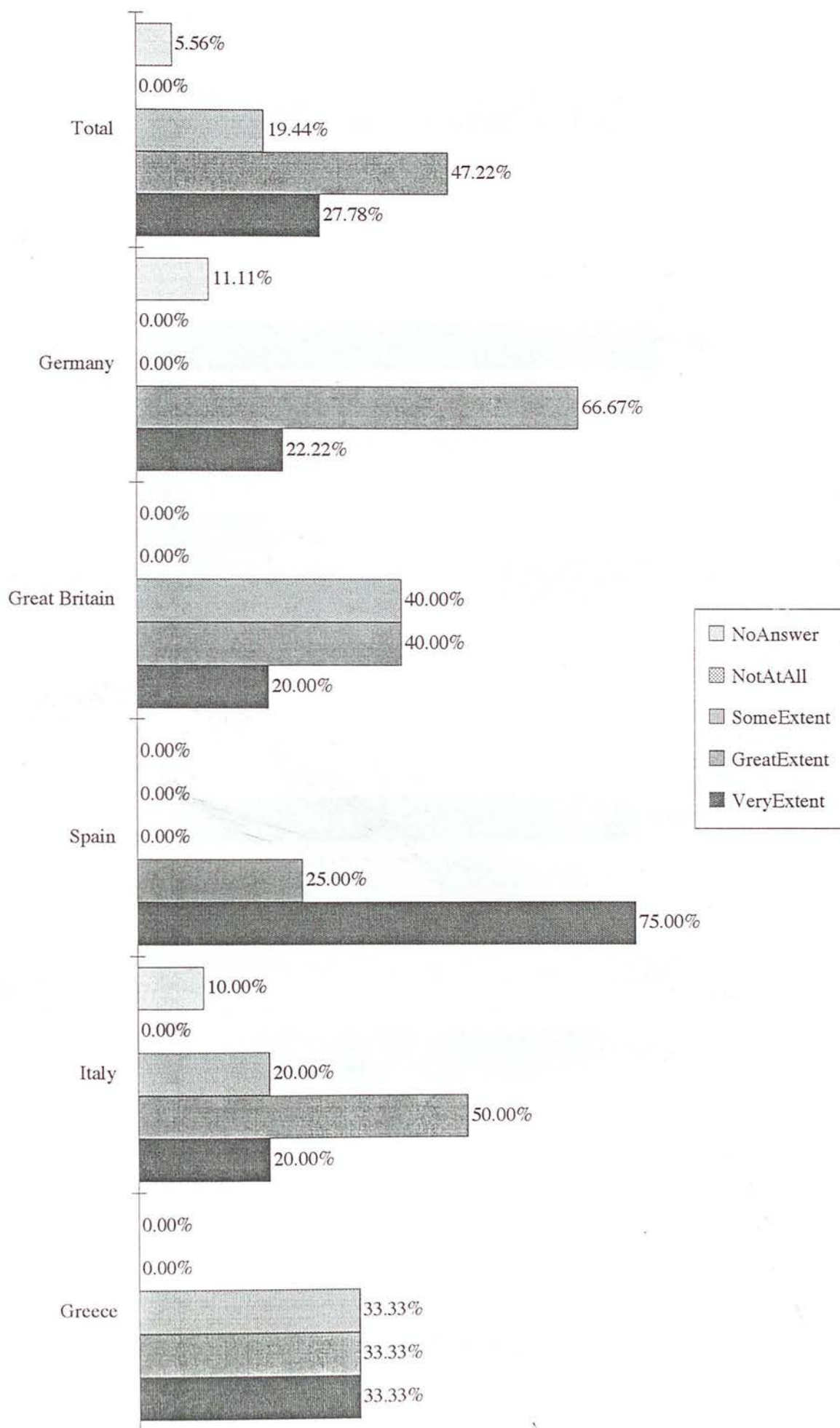


Chart.7.10

Importance of Comfort for a Pleasant Environment for the Clients

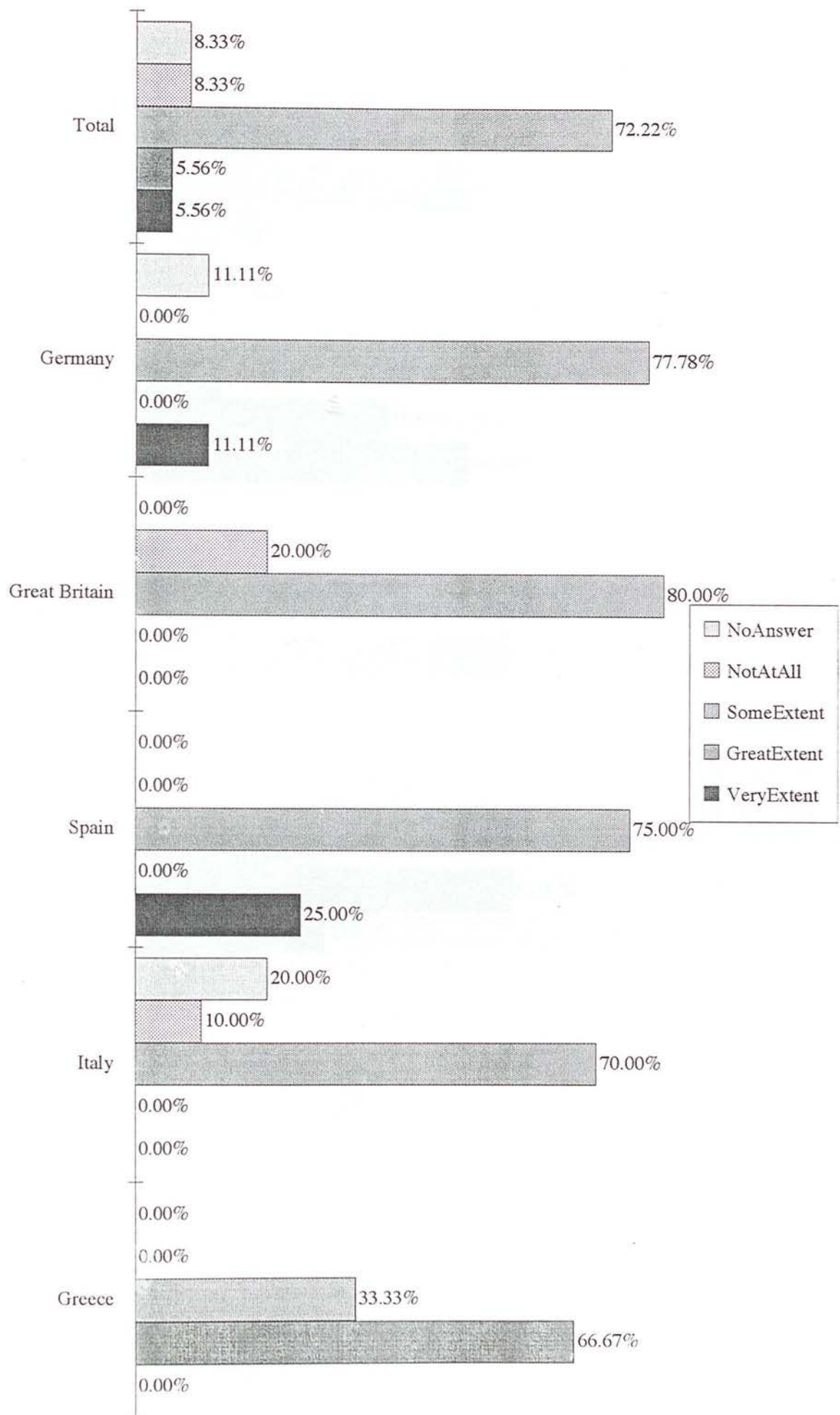


Chart.7.11

Importance of Luxury for a Pleasant Environment for the Clients



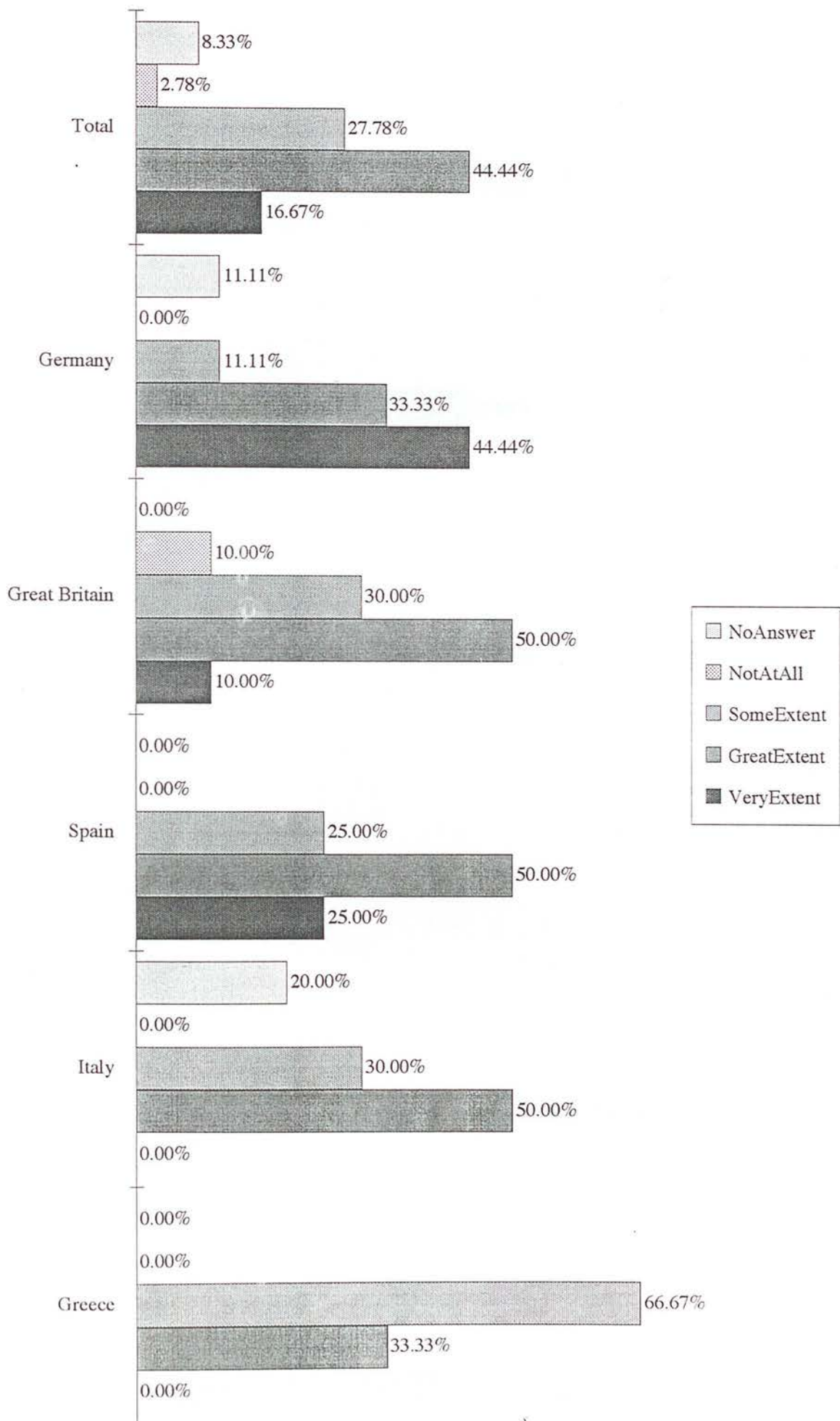


Chart.7.12 Importance of Furnishings for a Pleasant Environment for the Clients

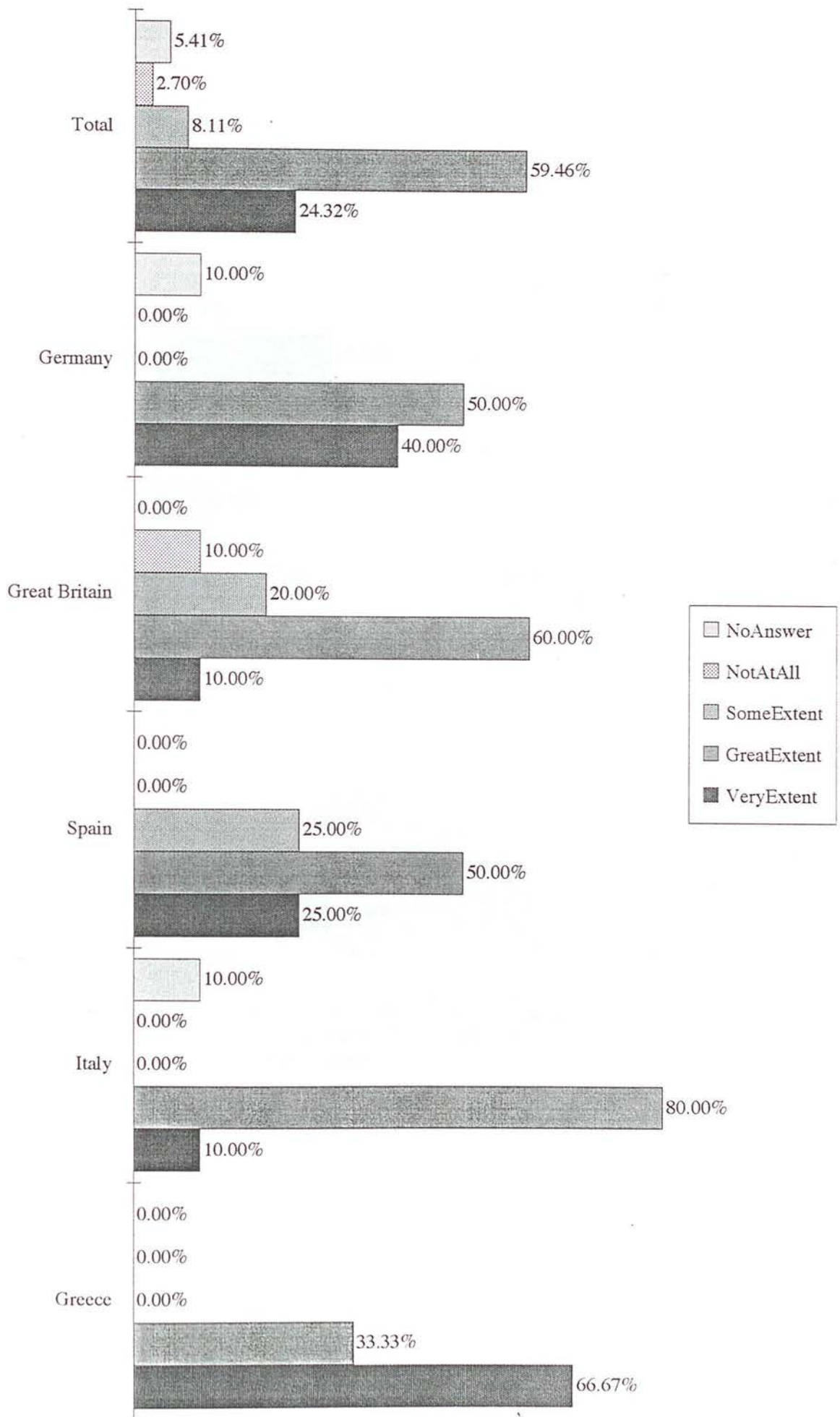


Chart.7.13

Importance of Space for a Pleasant Environment for the Clients

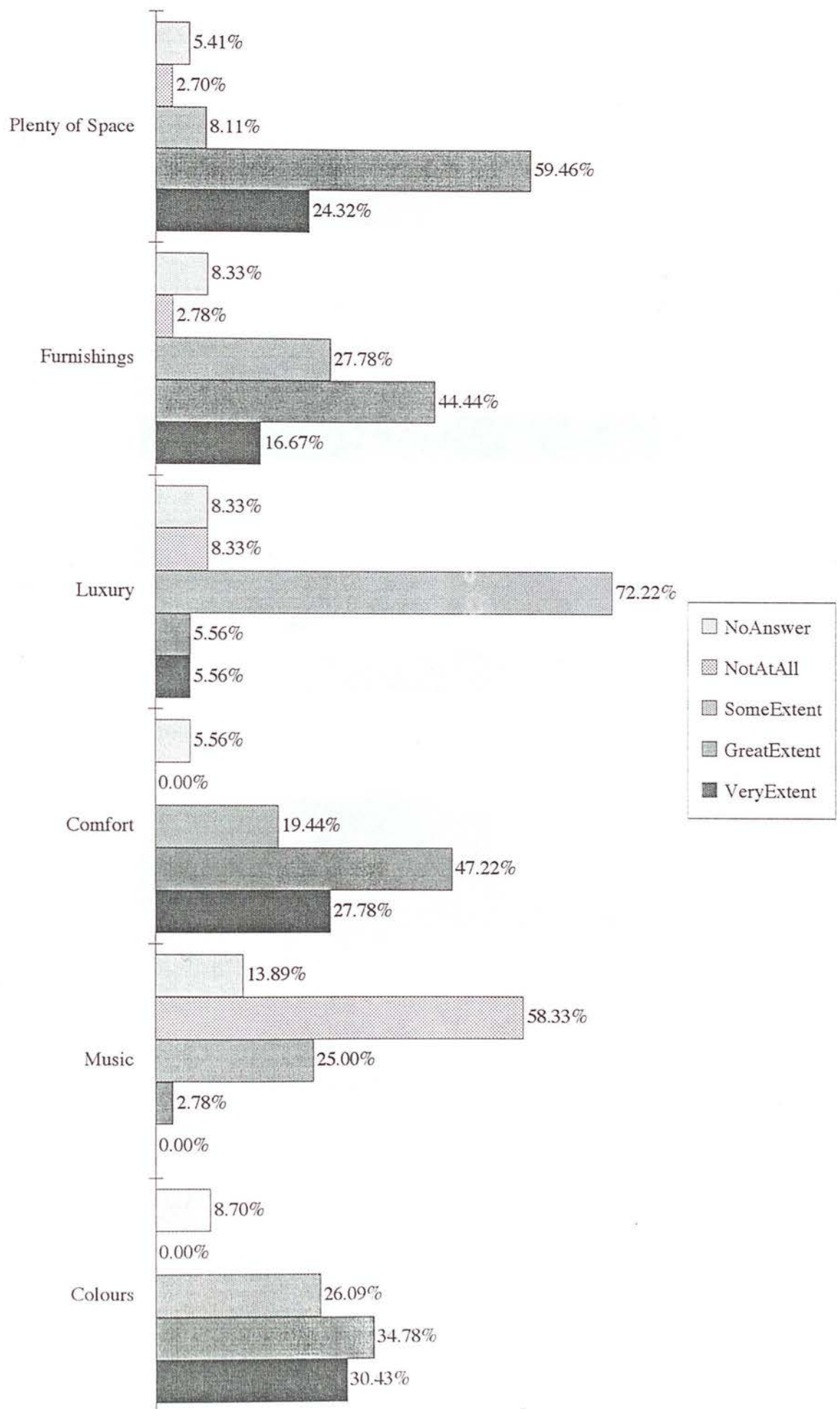


Chart.7.14

Important Factors for a Pleasant Environment for the Clients



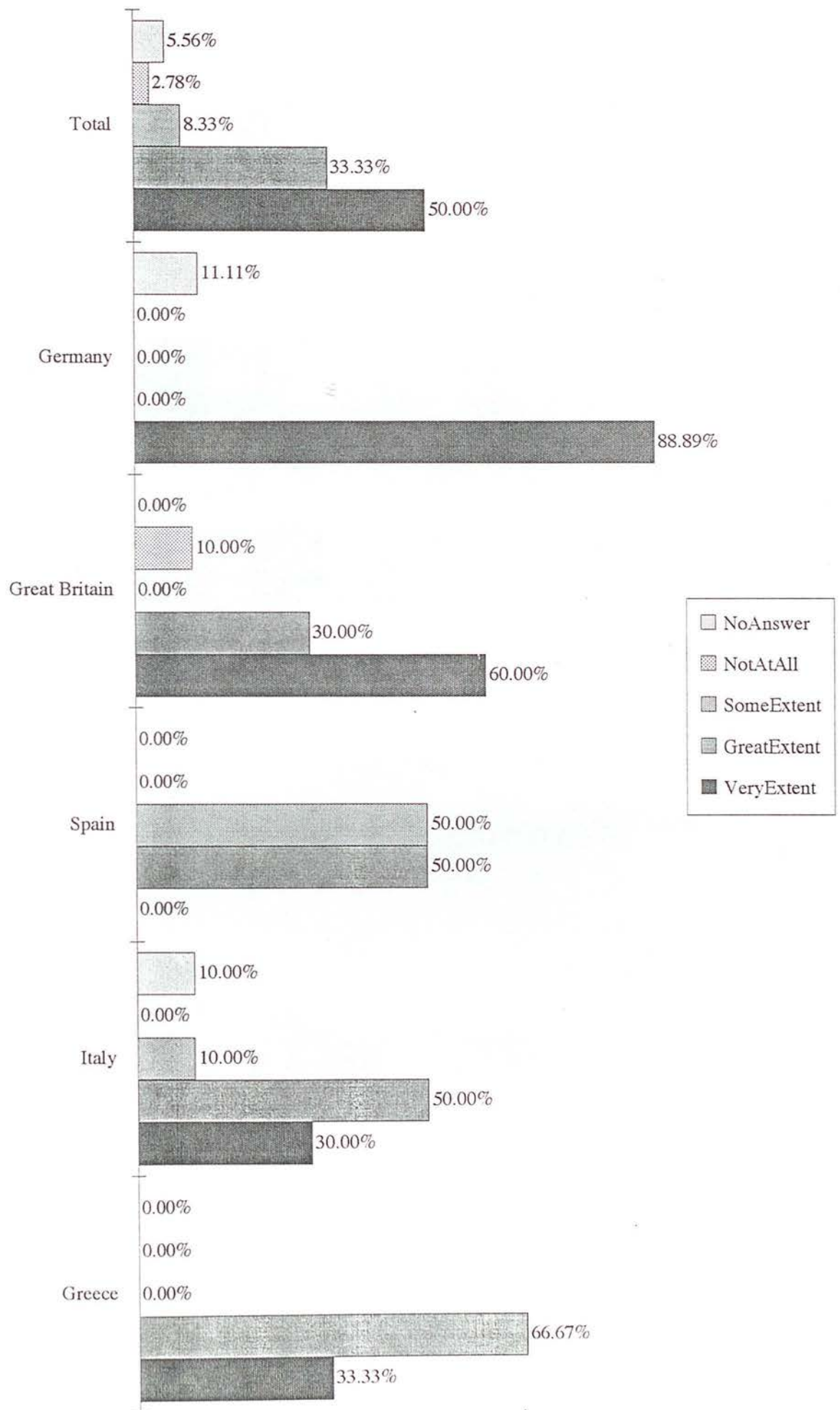


Chart.8.1

The Extent to which Friendliness should be Expressd by a Bank

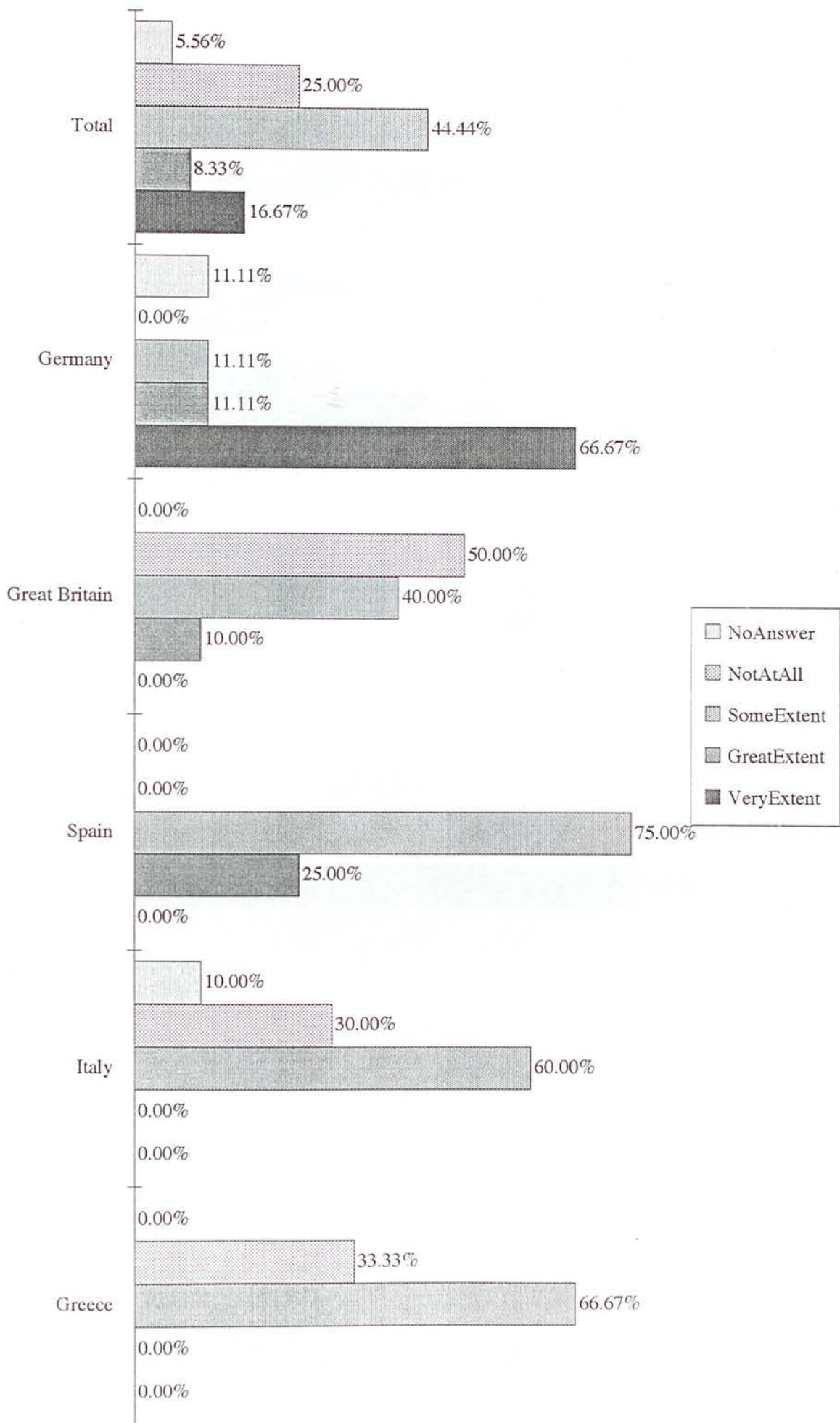


Chart.8.2

The Extent to which Austerity should be Expressed by a Bank

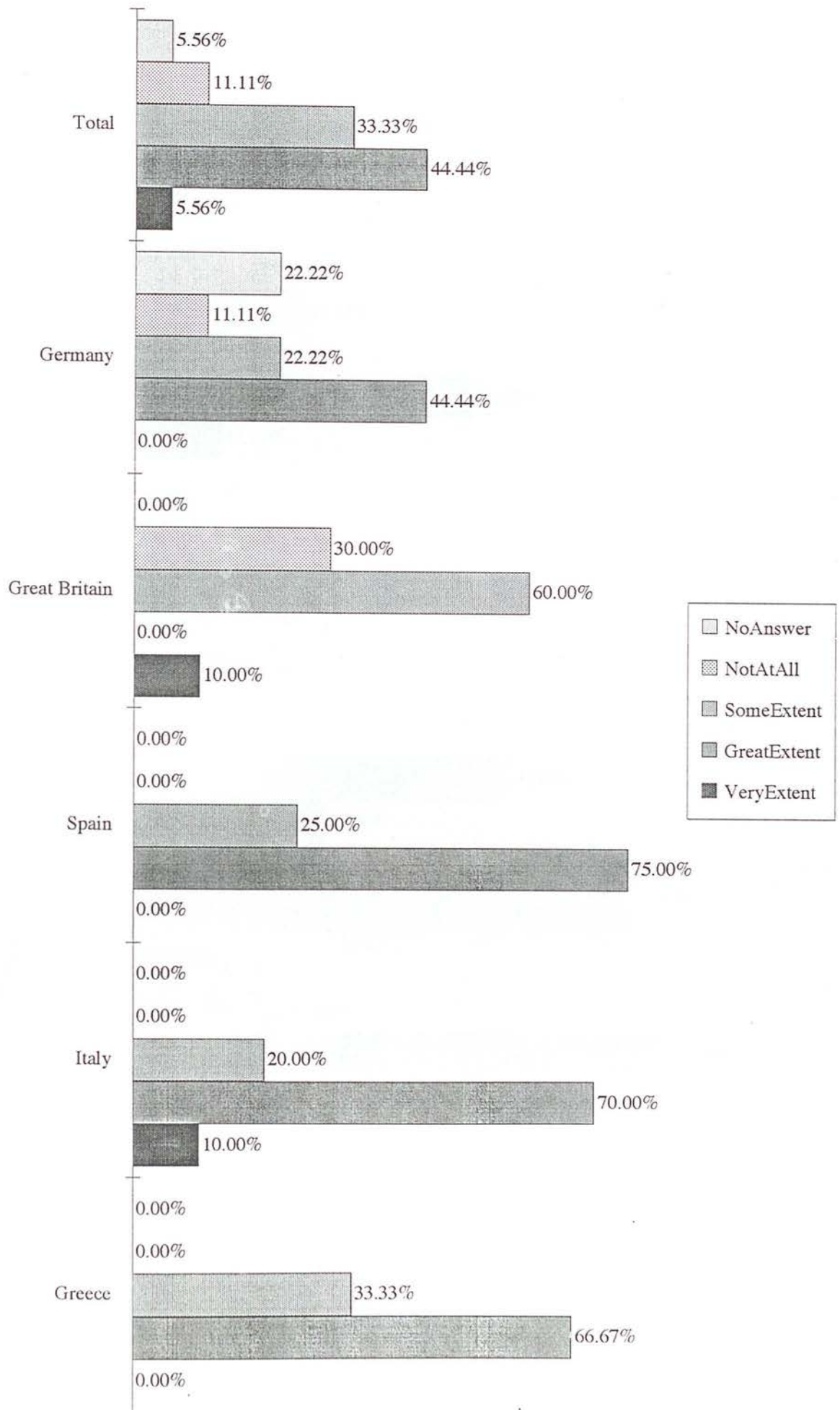


Chart.8.3

The Extent to which Sobriety should be Expressed by a Bank



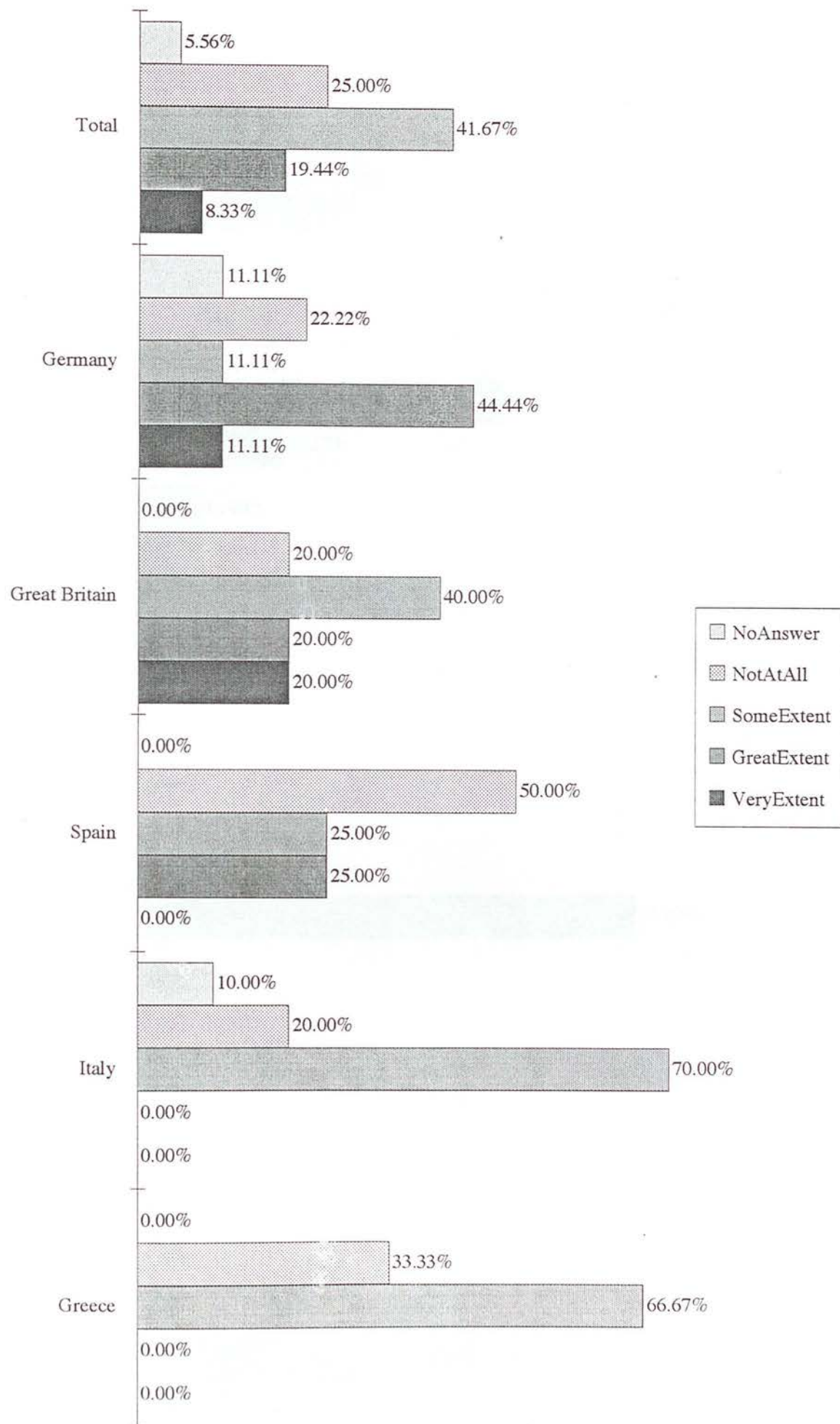


Chart.8.4

The Extent to which Authority should be Expressed by a Bank

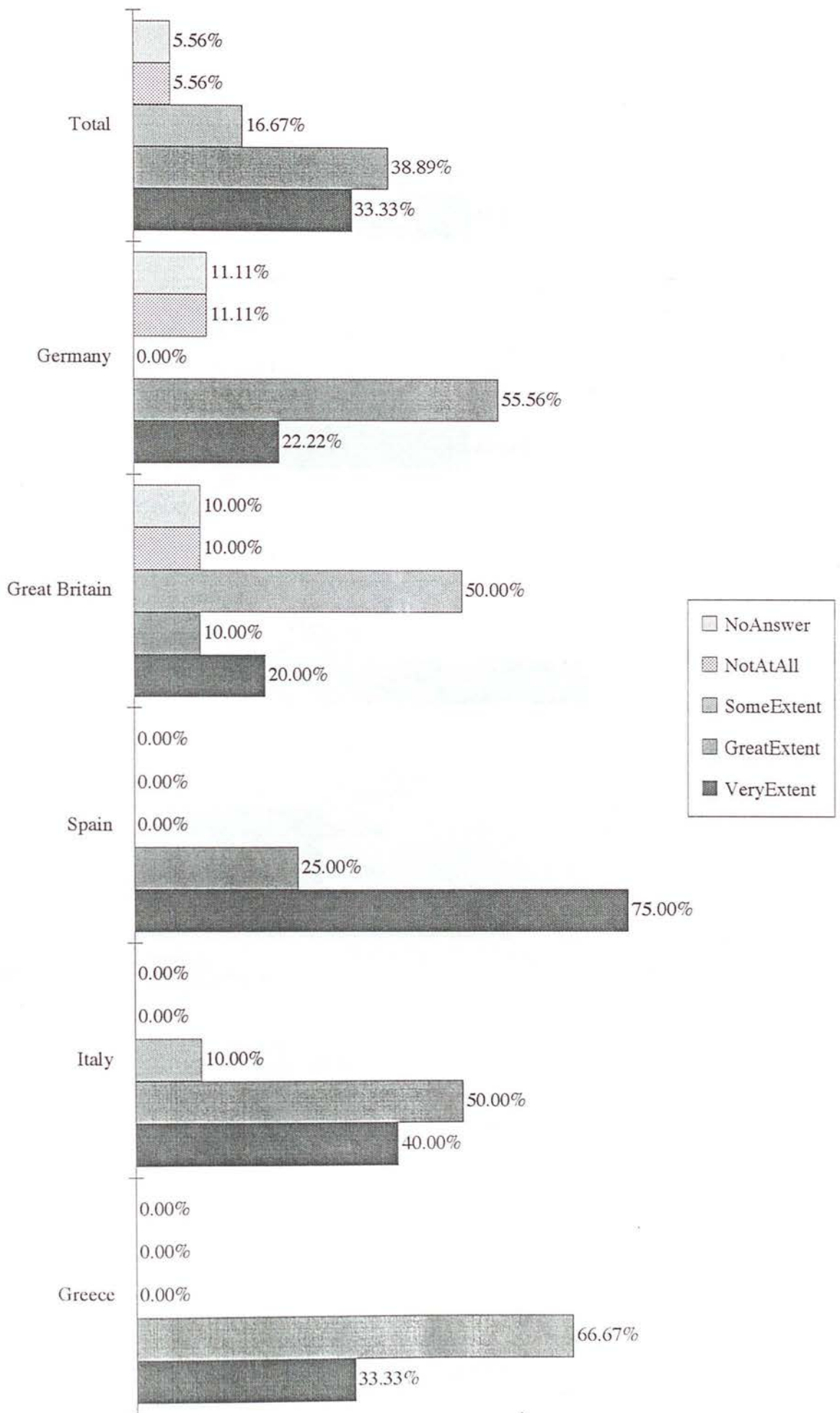


Chart.8.5

The Extent to which Rationality should be Expressed by a Bank

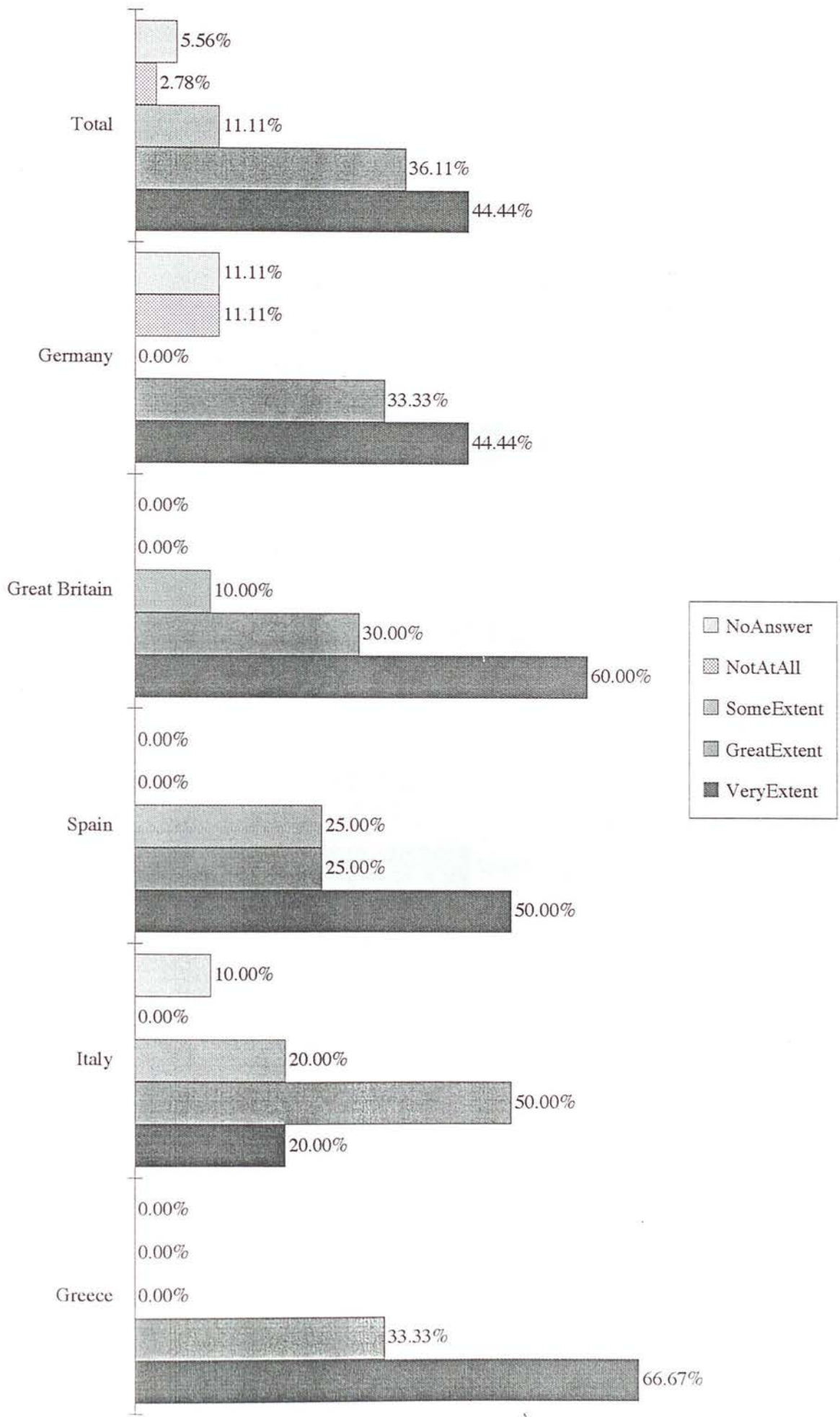


Chart.8.6

The Extent to which Stability should be Expressed by a Bank



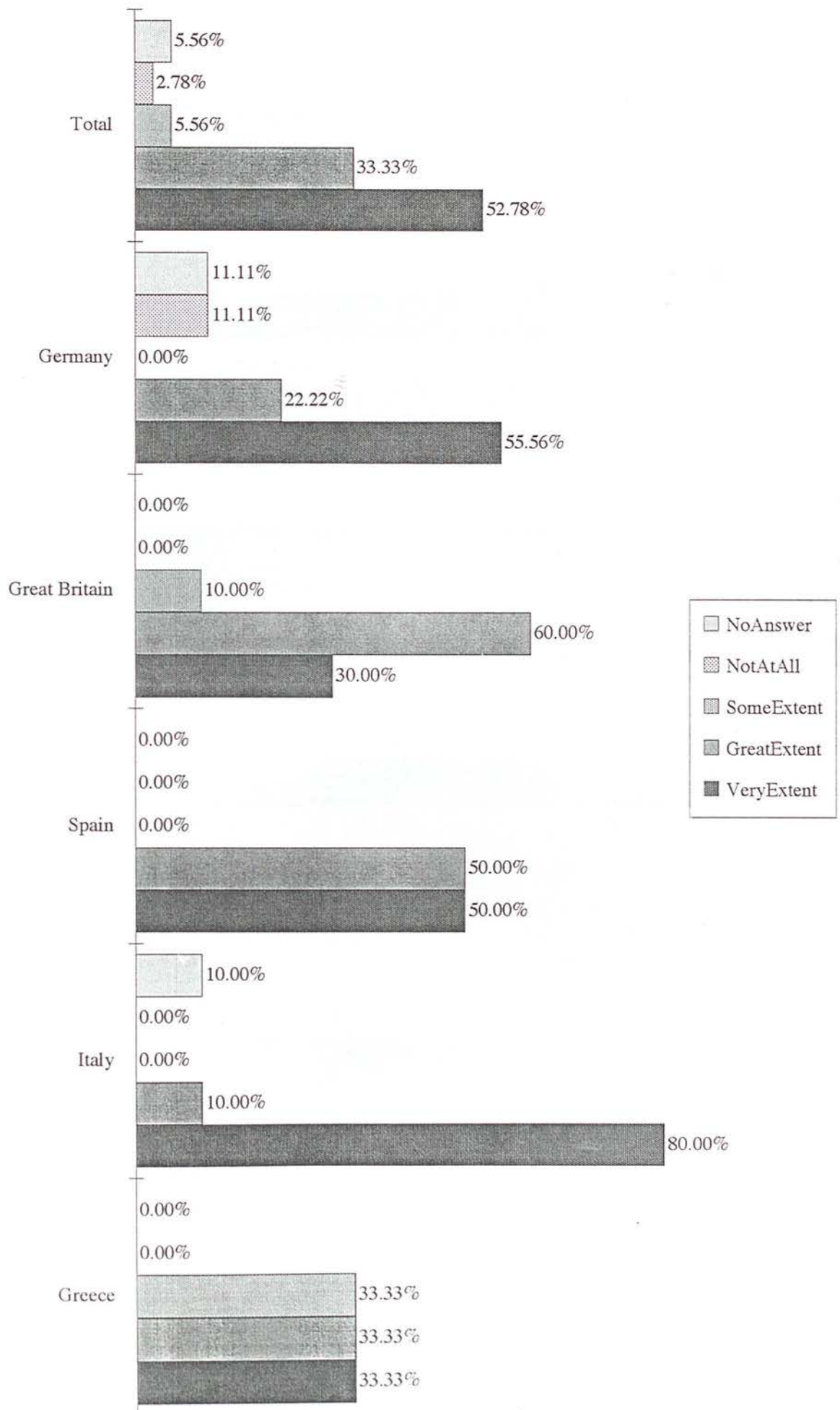


Chart.8.7

The Extent to which Flexibility should be Expressed by a Bank

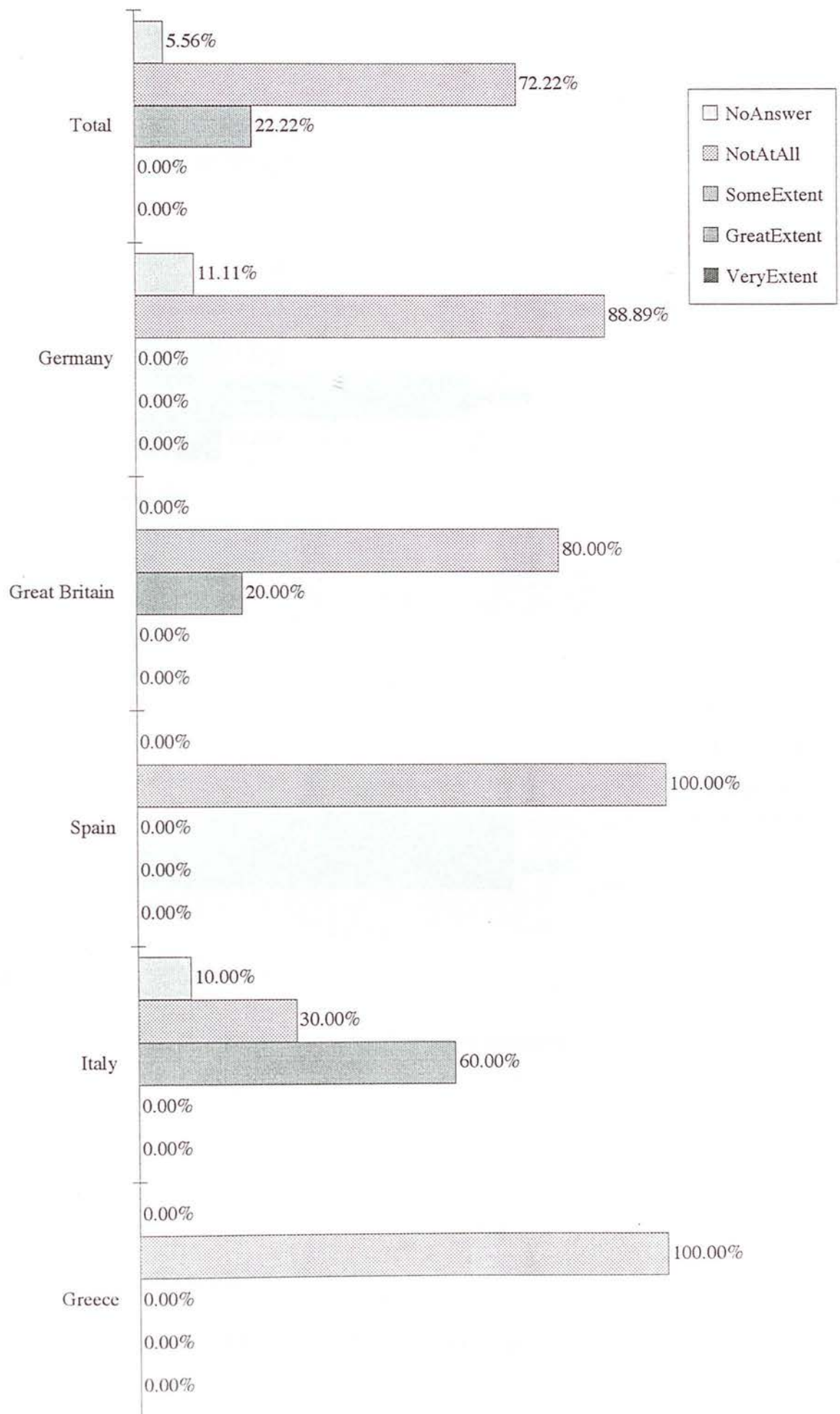


Chart.8.8

The Extent to which Impersonality should be Expressed by a Bank

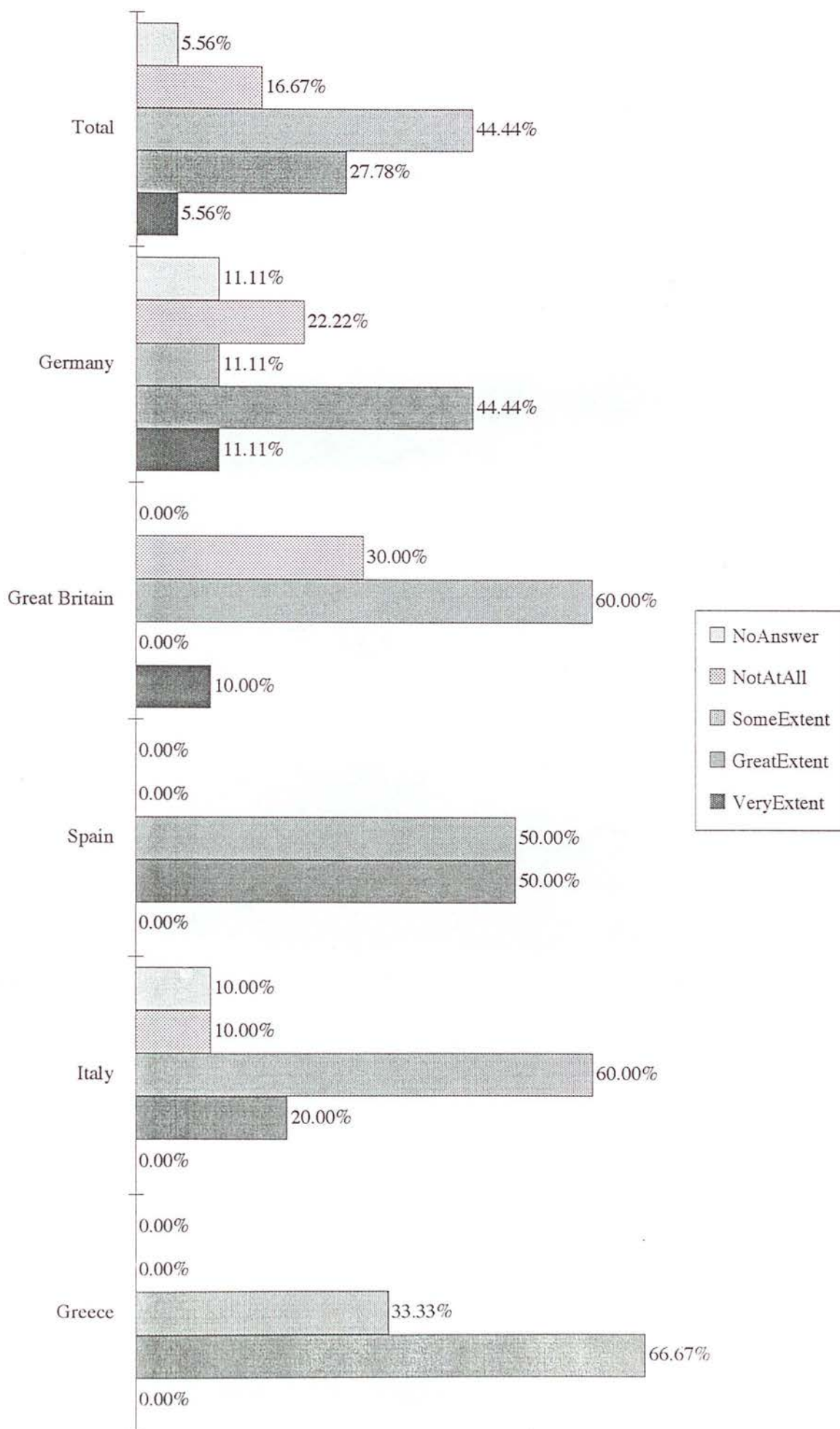


Chart.8.9

The Extent to which Independence should be Expressed by a Bank



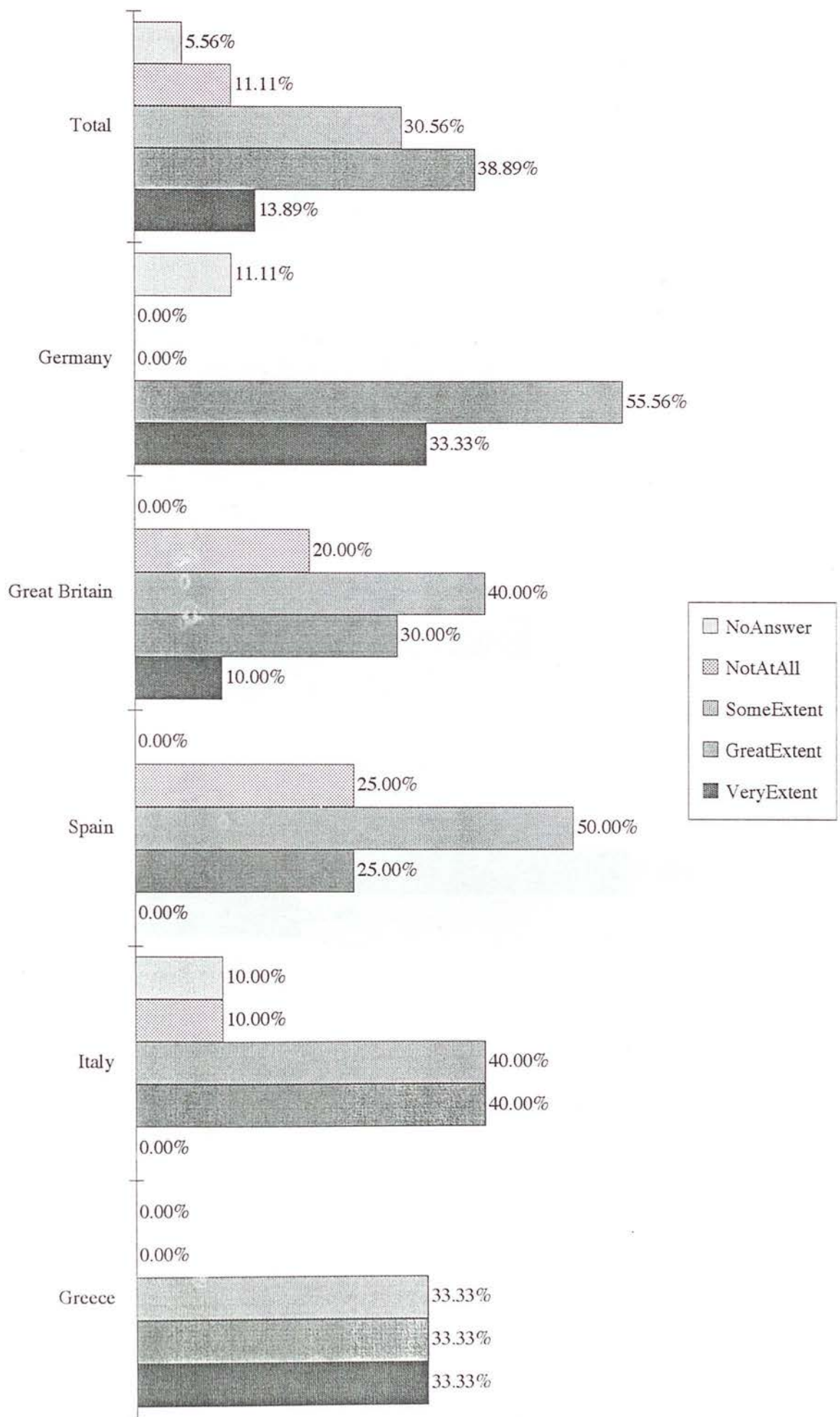


Chart.8.10

The Extent to which Individuality should be Expressed by a Bank

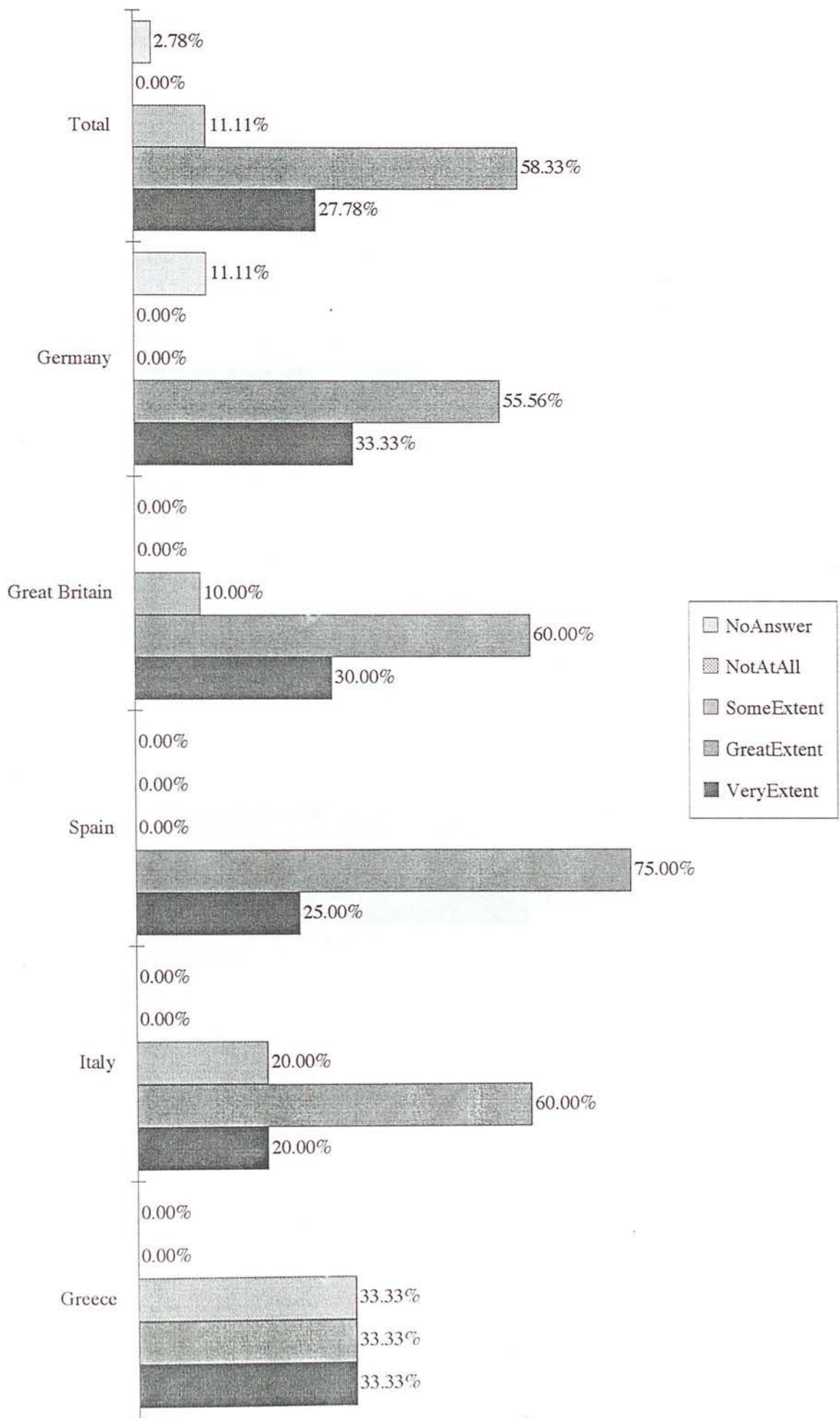


Chart.8.11

The Extent to which Openness should be Expressed by a Bank

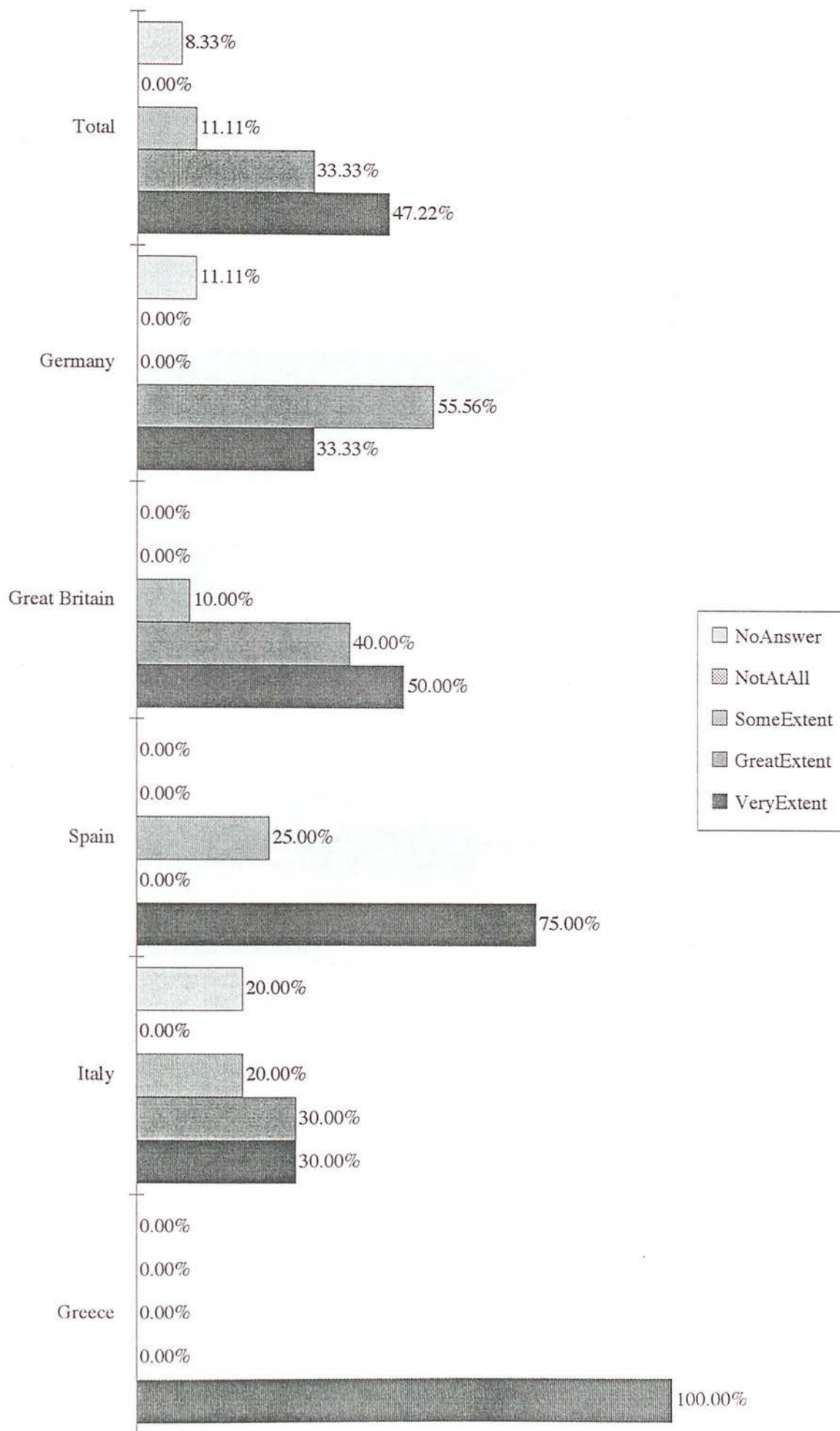


Chart.8.12

The Extent to which Consistency should be Expressed by a Bank



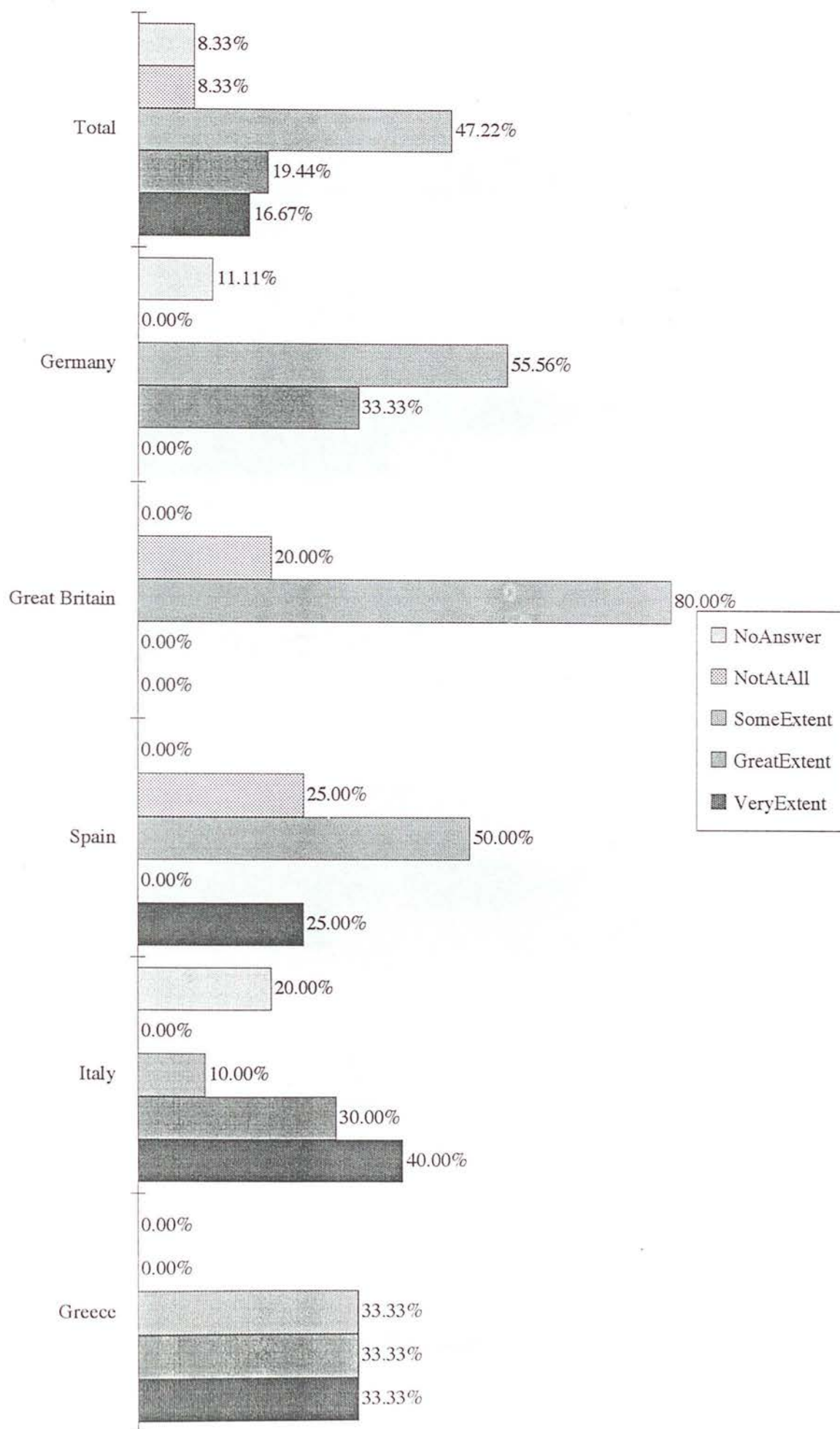
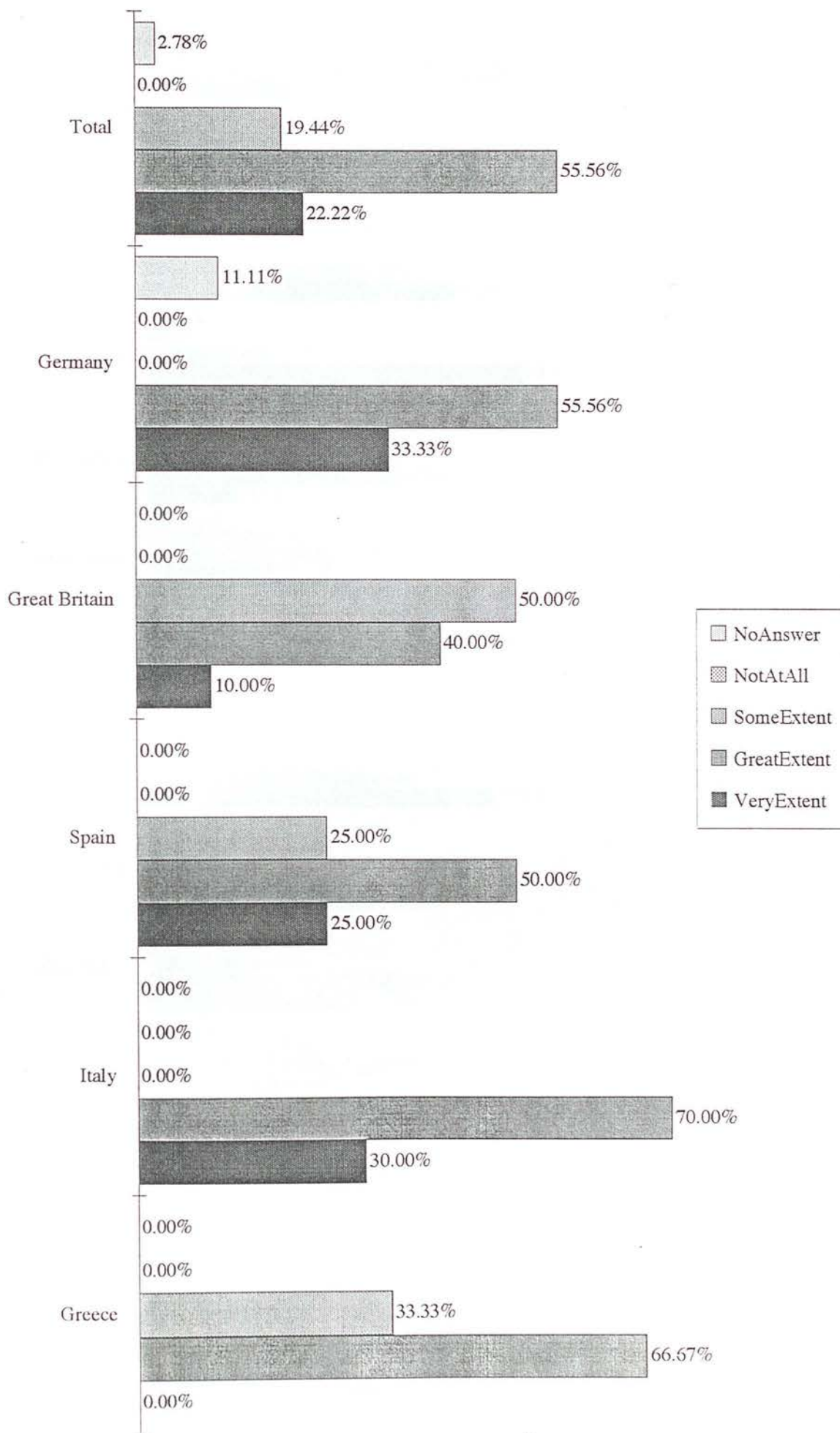


Chart.8.13

The Extent to which Affluence should be Expressed by a Bank



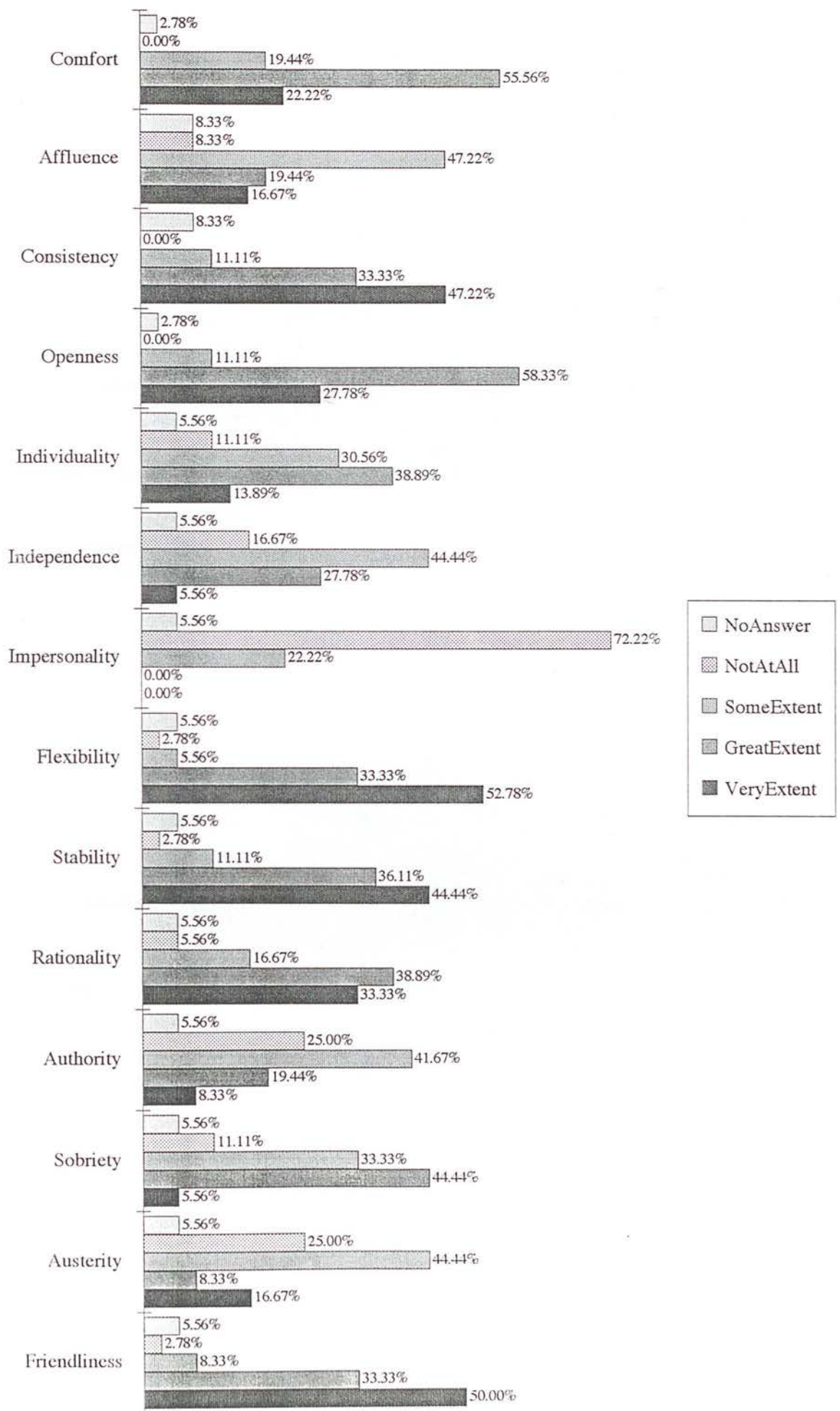


Chart.8.15

The Extent to which Concepts should be Expressed by a Bank



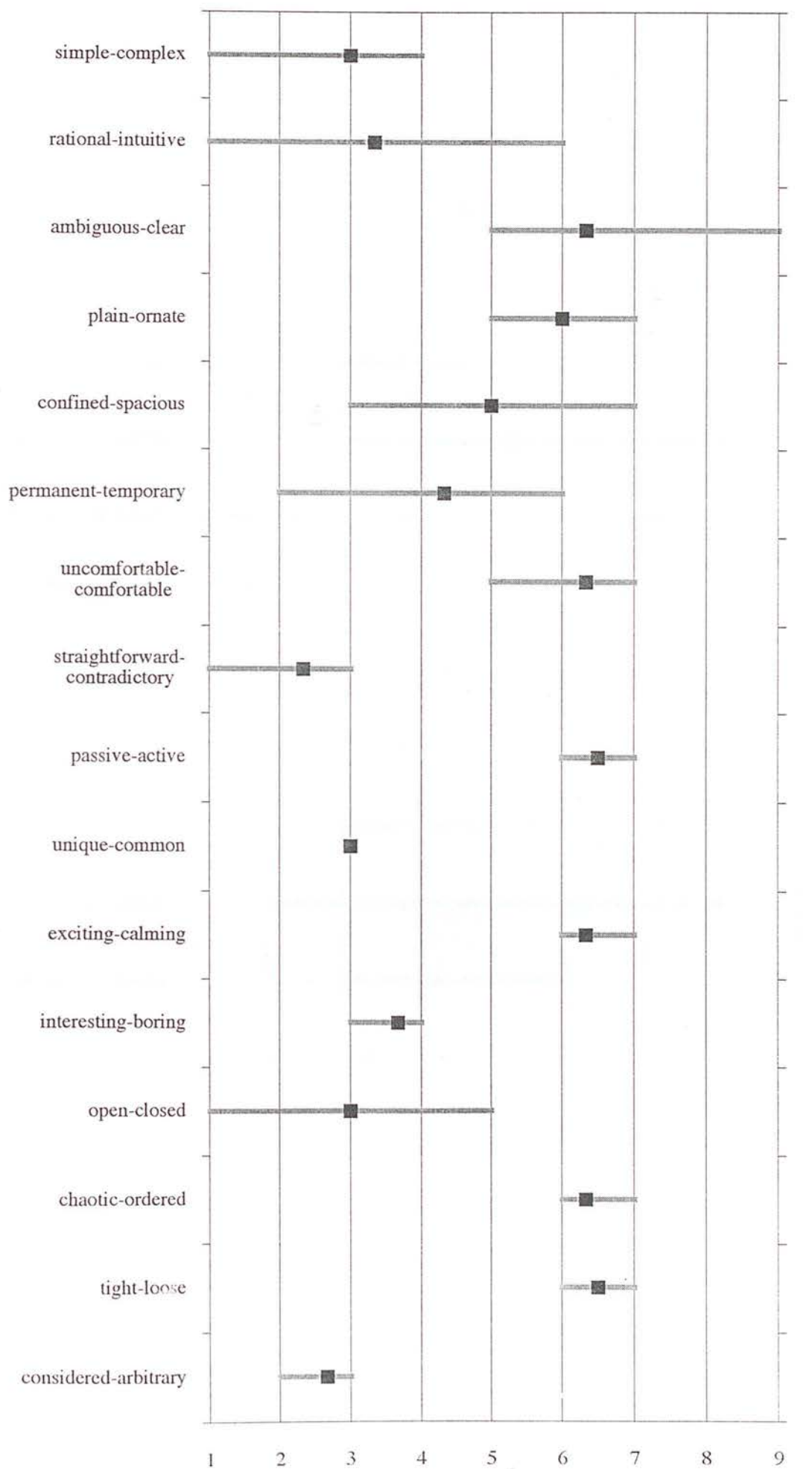


Chart.9.1 The Working Environment of an average branch of a Bank in Greece

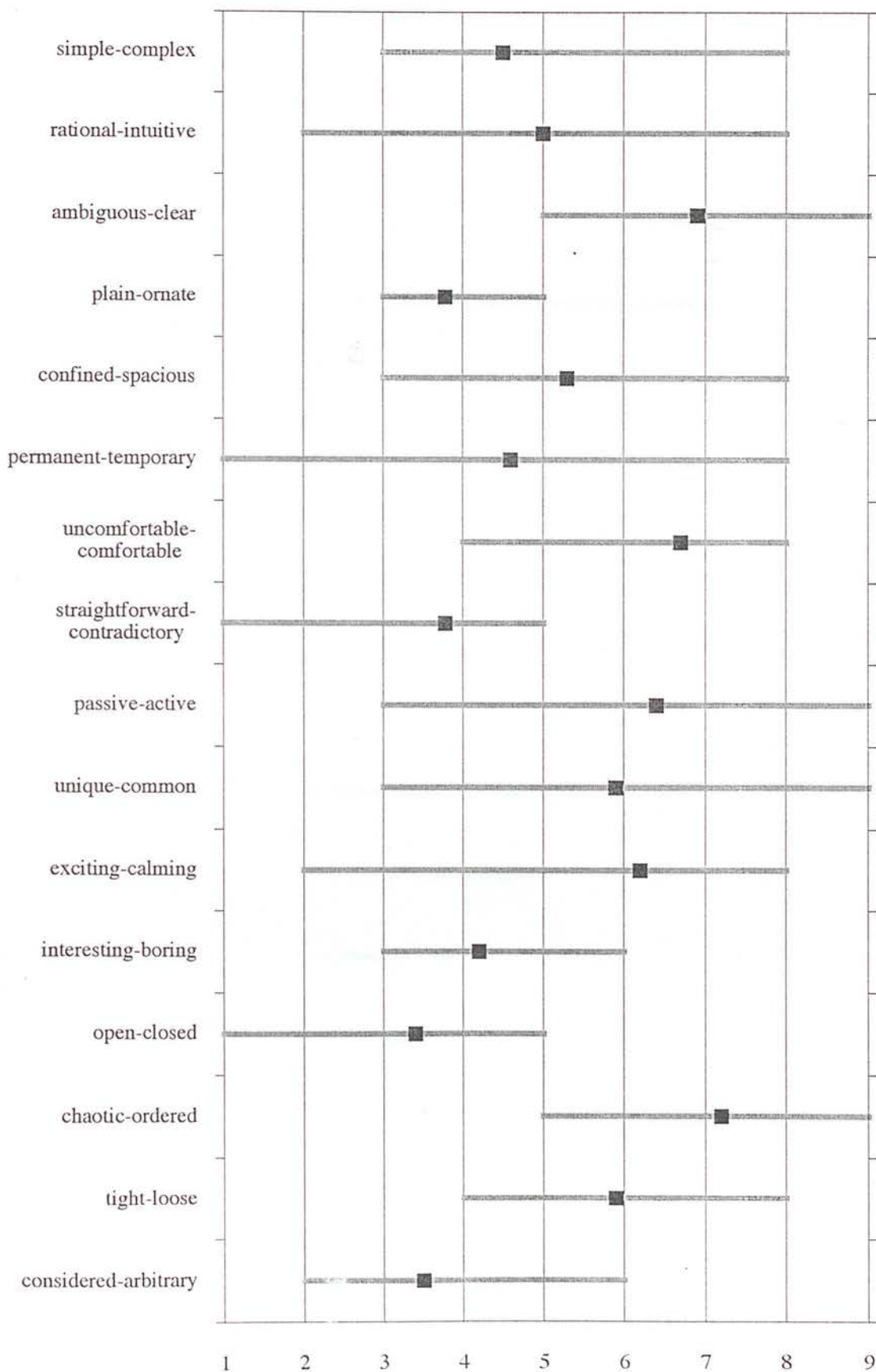


Chart.9.2 The Working Environment of an average branch of a Bank in Italy

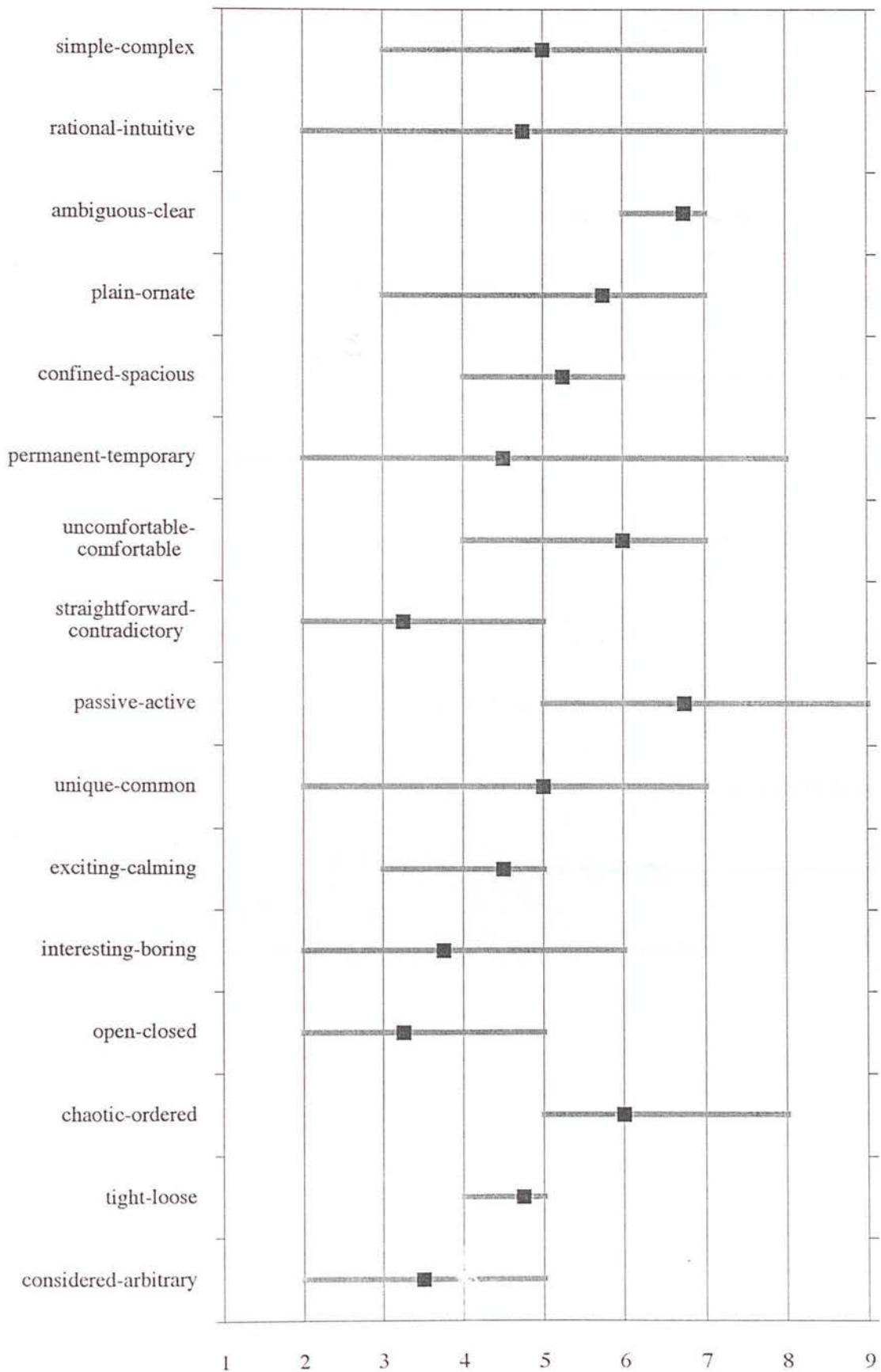


Chart.9.3 The Working Environment of an average branch of a Bank in Spain



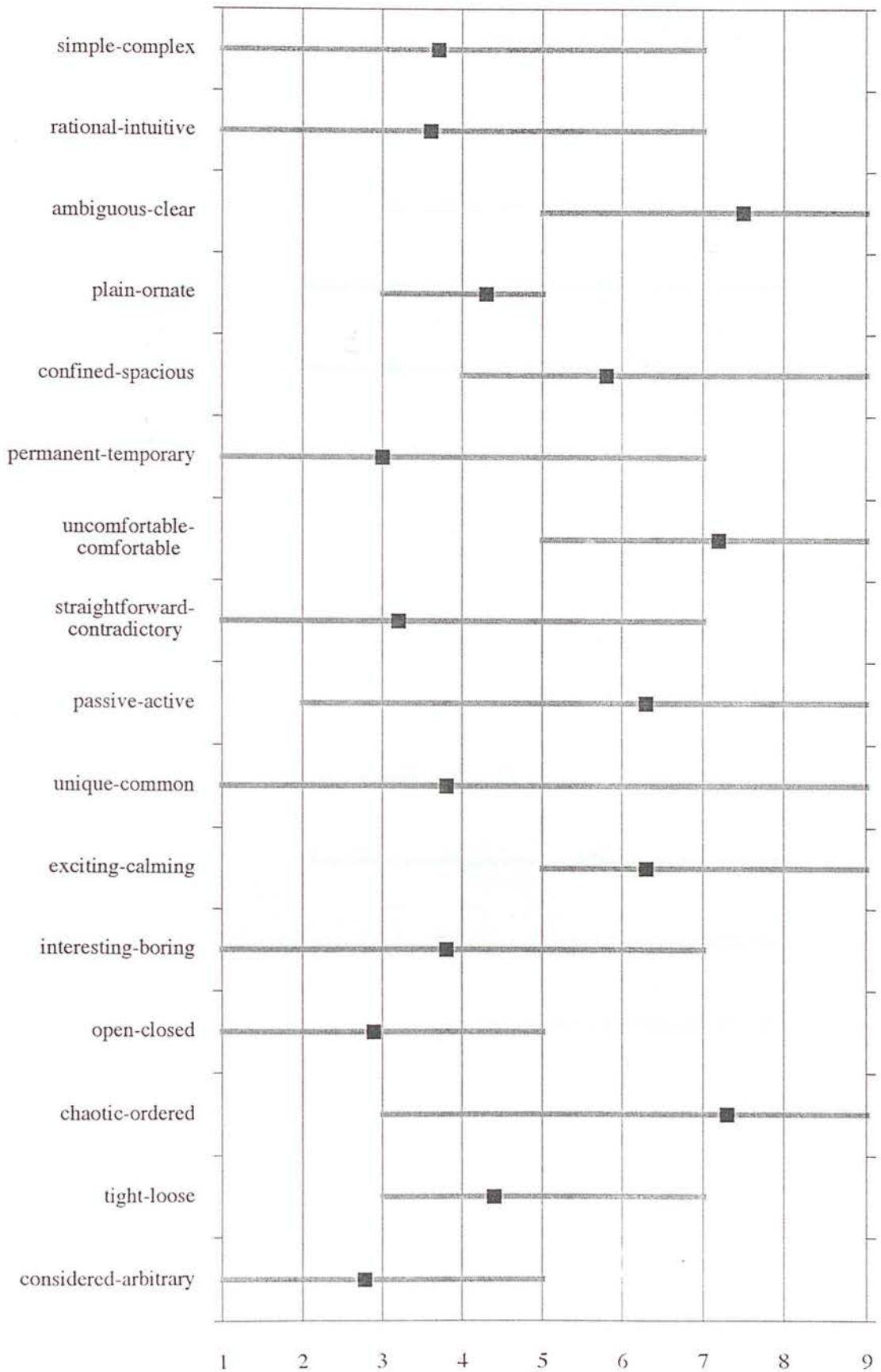


Chart.9.4 The Working Environment of an average branch of a Bank in Britain

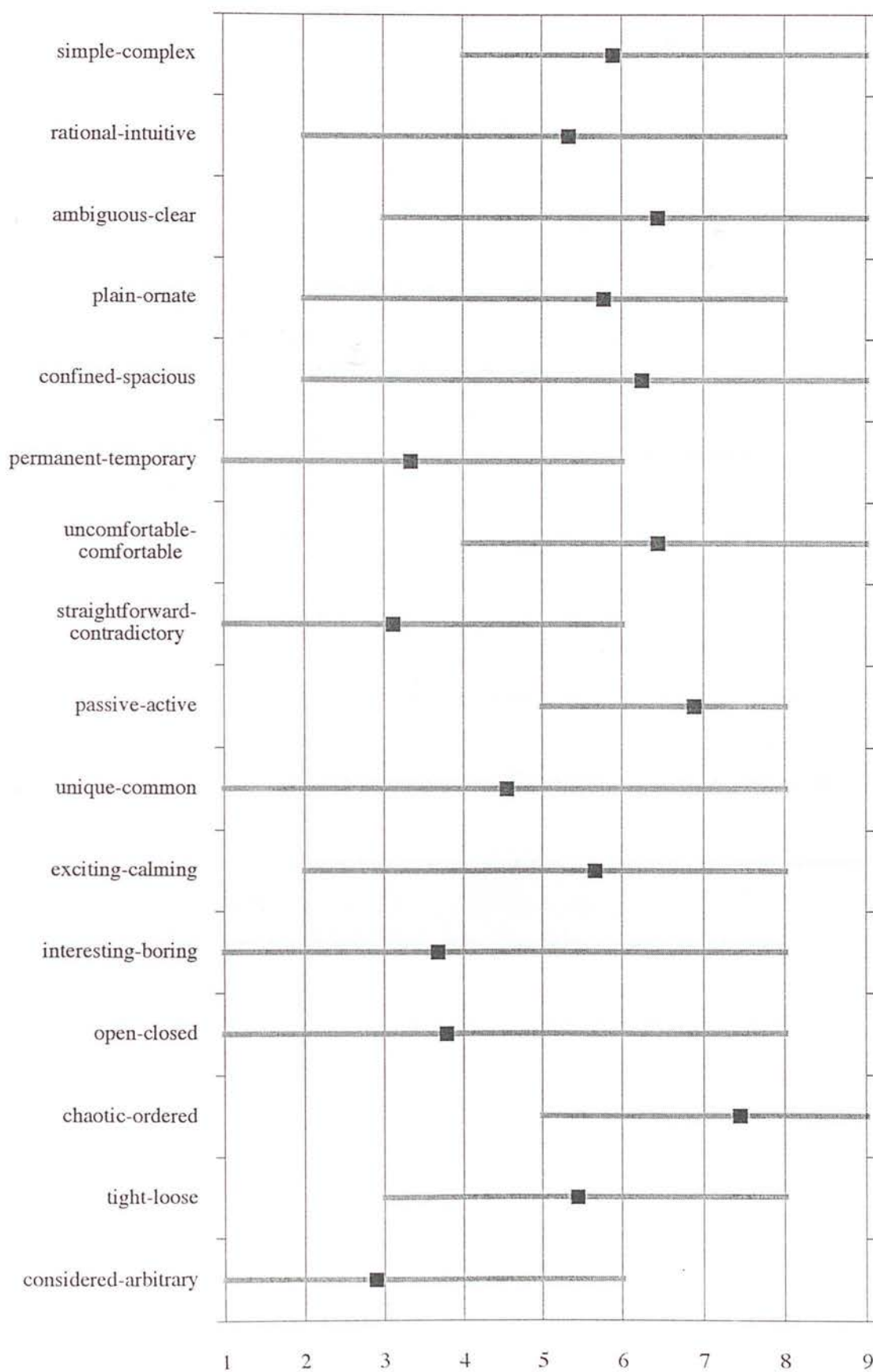


Chart.9.5 The Working Environment of an average branch of a Bank in Germany

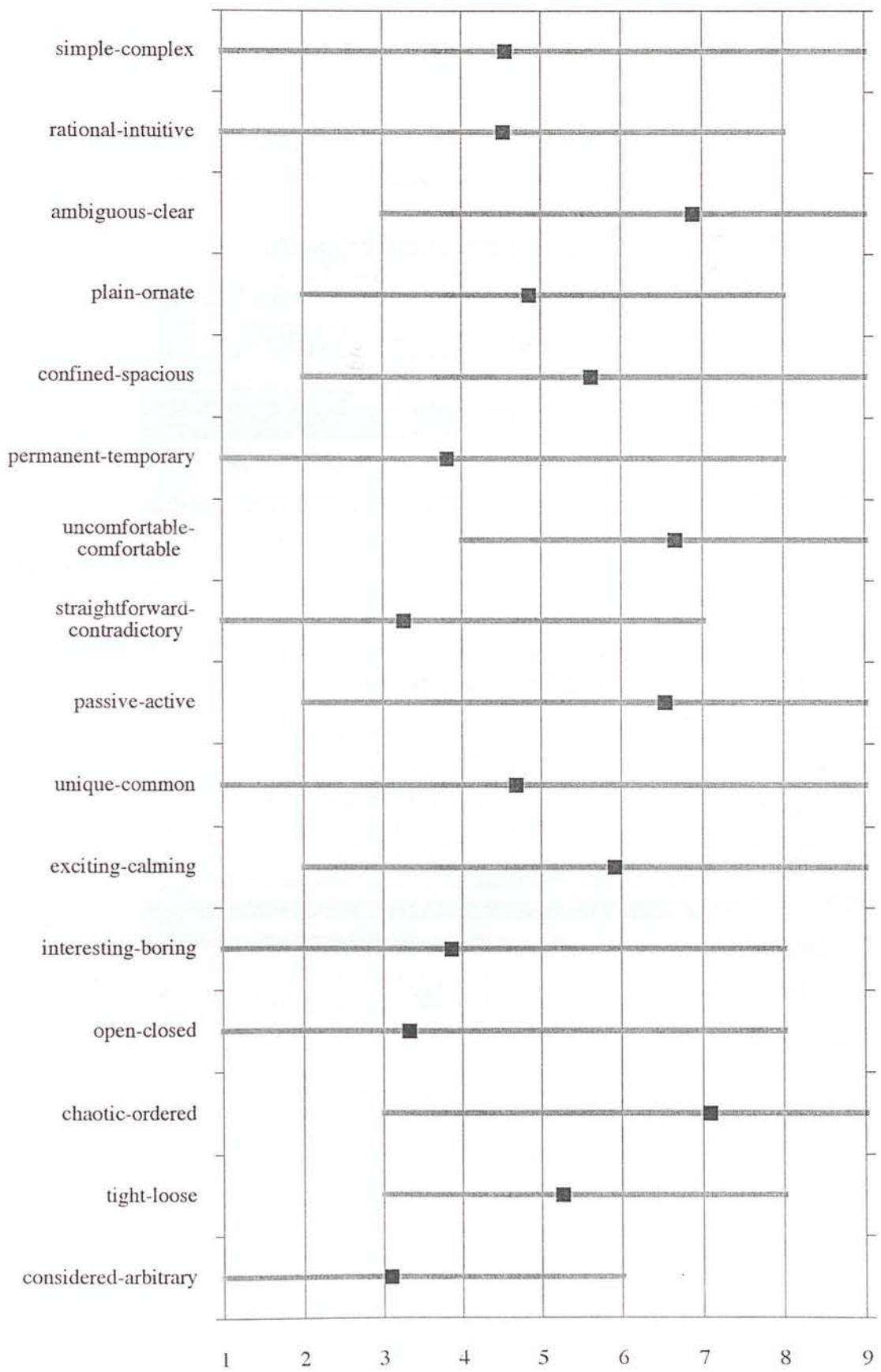


Chart.9.6

The Working Environment of an average branch of a Bank



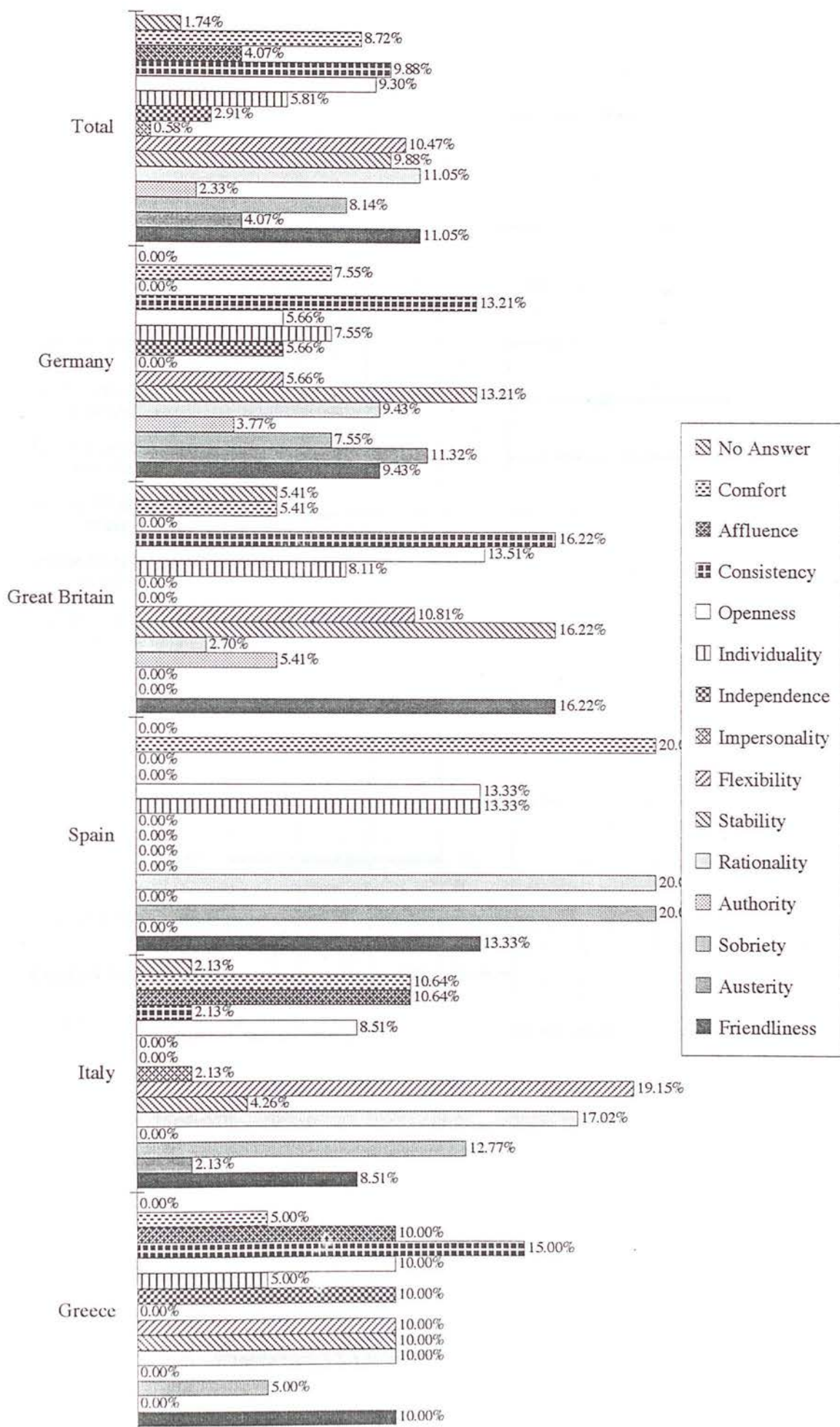


Chart.9.7 Concepts Reflected by the Characterization about the Working Environment

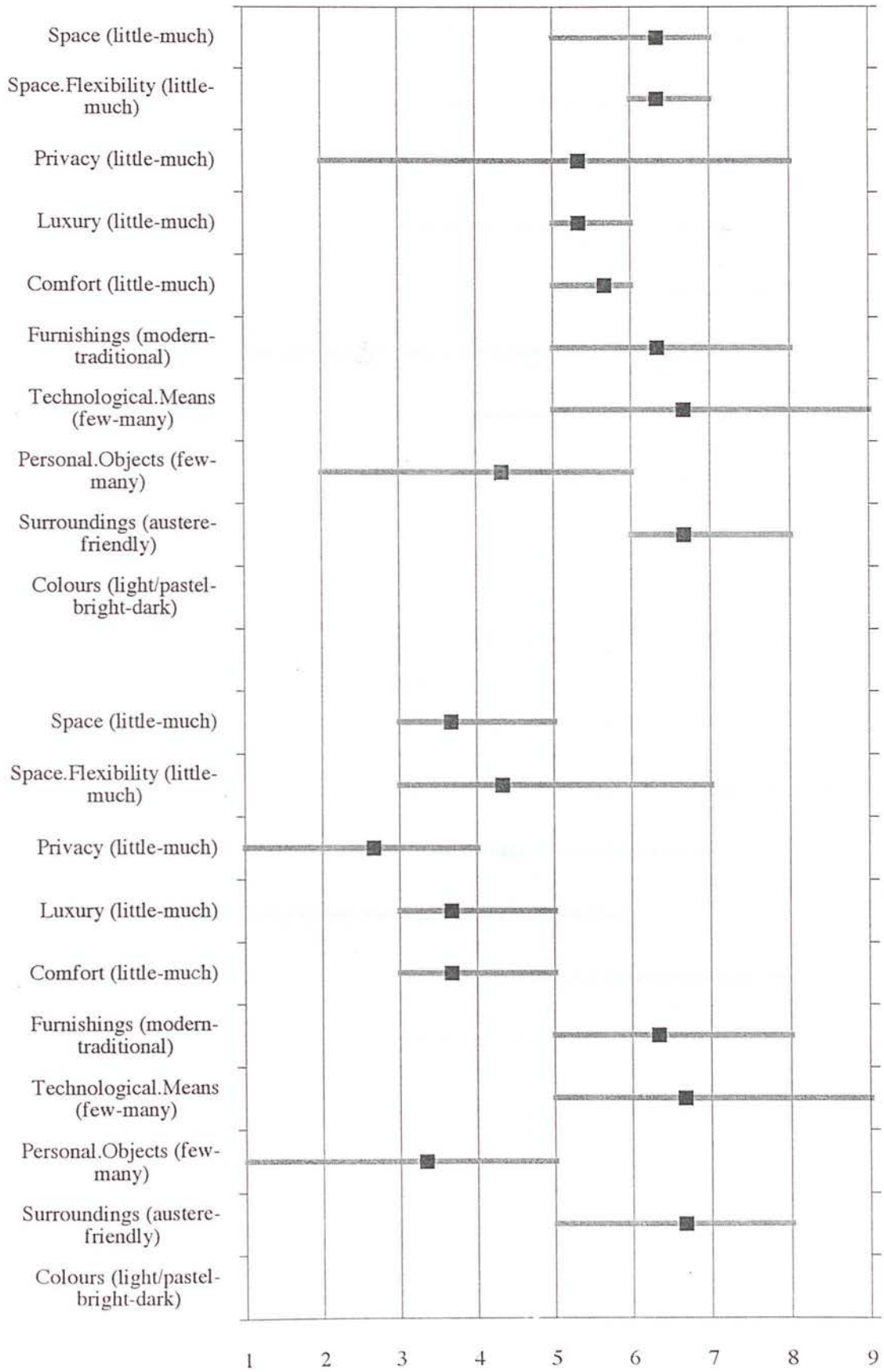


Chart.10.1 Means to Differentiate Hierarchical Levels in Greek Banks

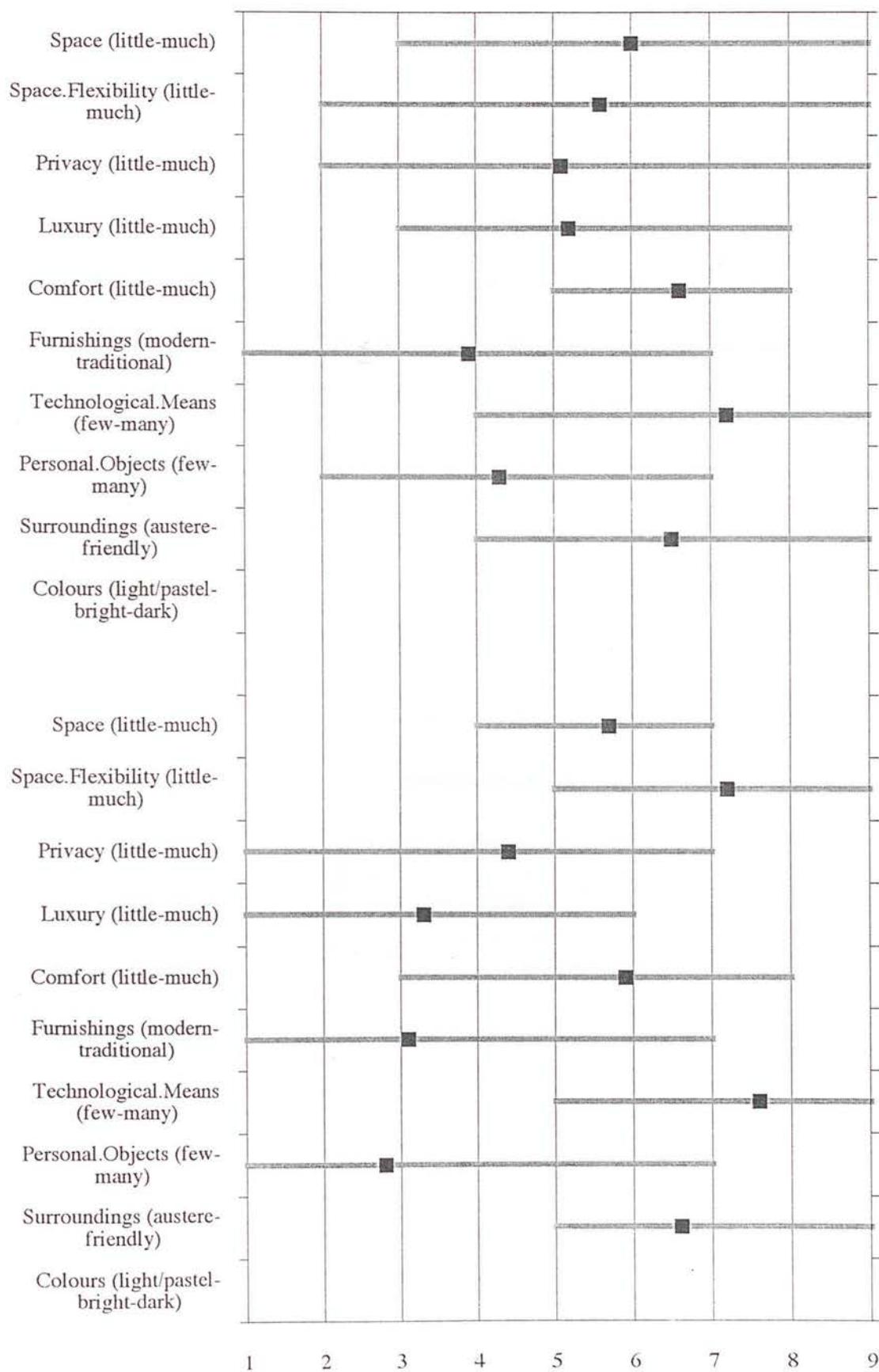


Chart.10.2

Means to Differentiate Hierarchical Levels in Italian Banks



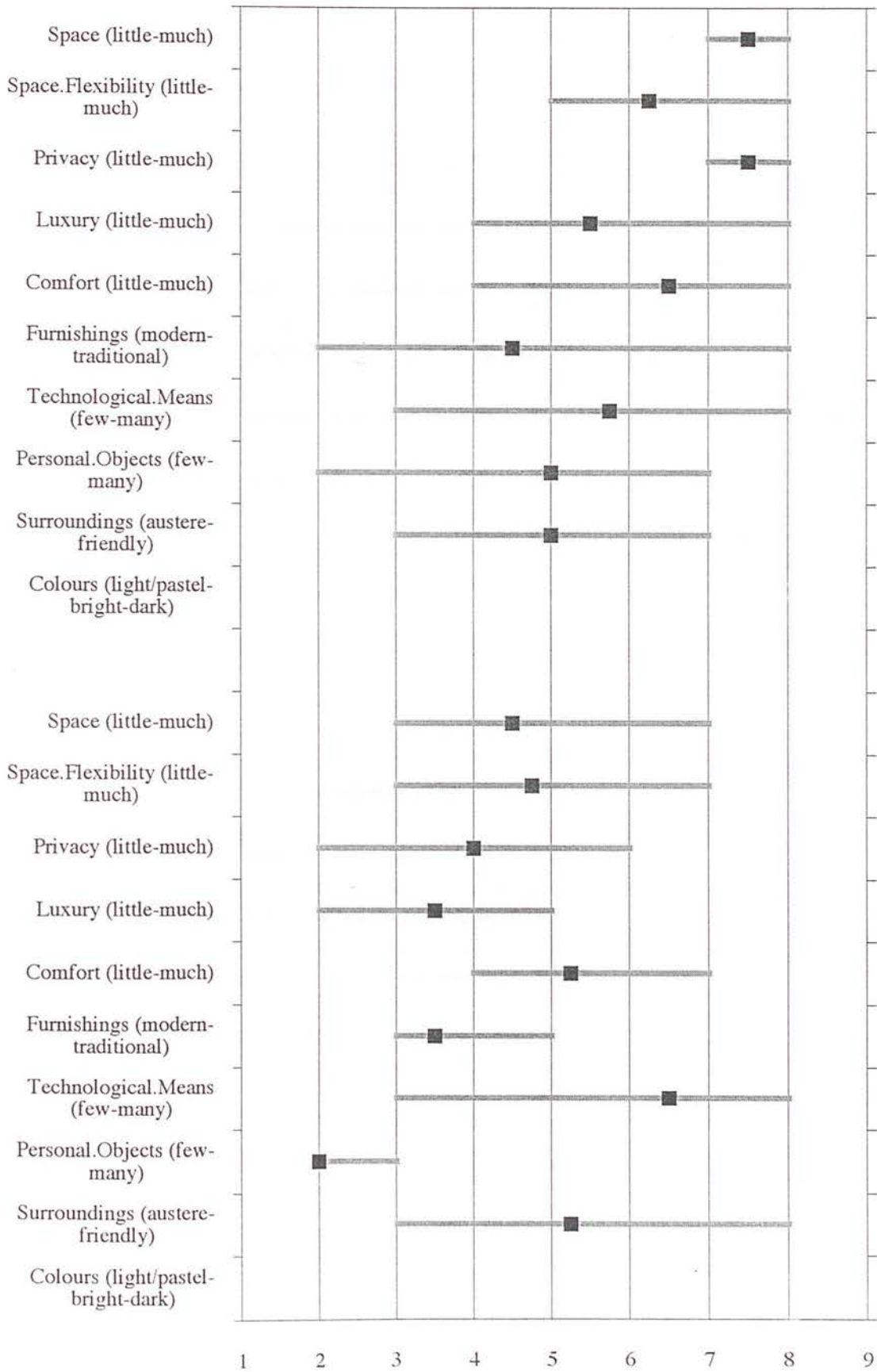


Chart.10.3

Means to Differentiate Hierarchical Levels in Spanish Banks

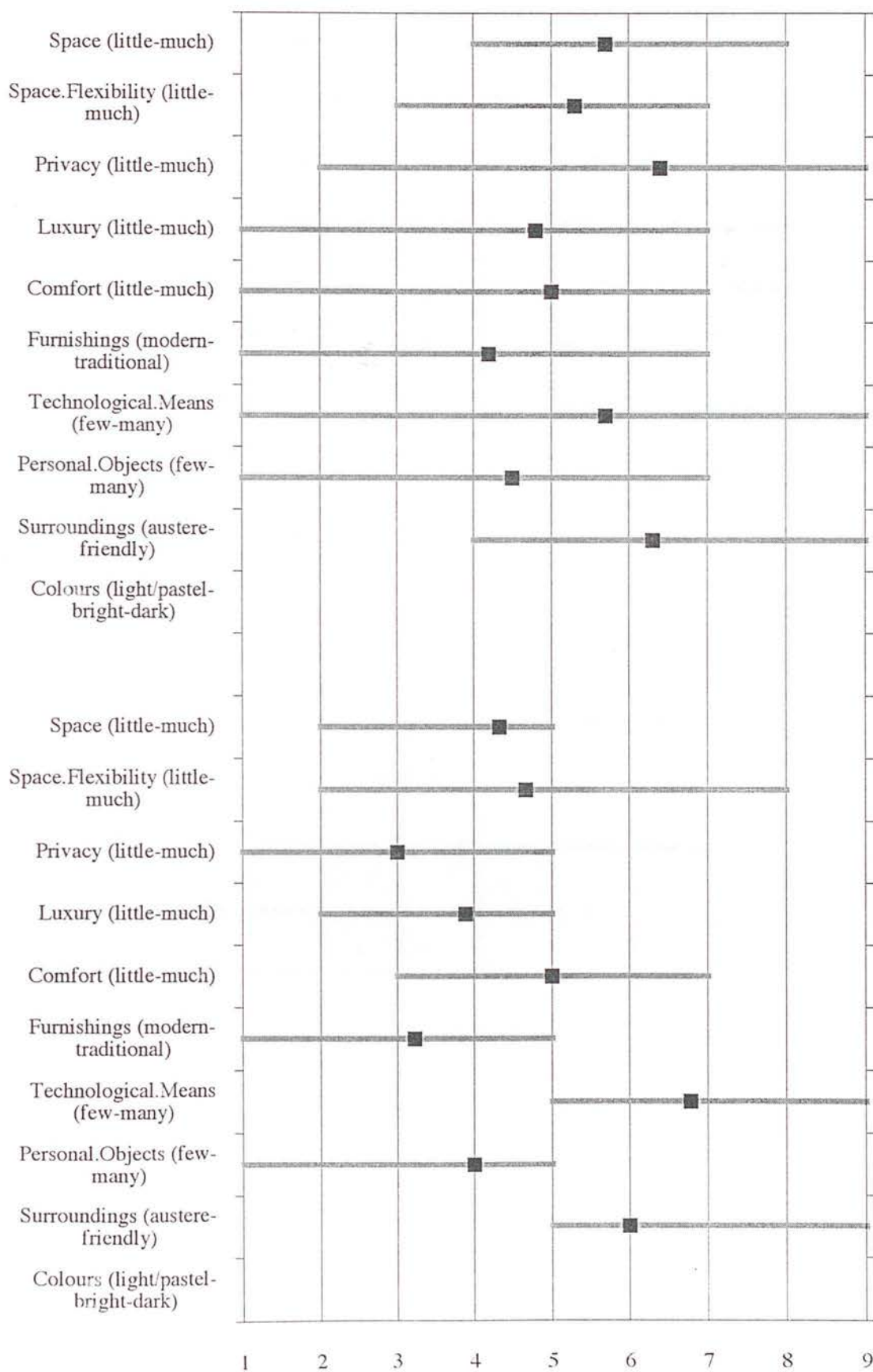


Chart.10.4

Means to Differentiate Hierarchical Levels in British Banks

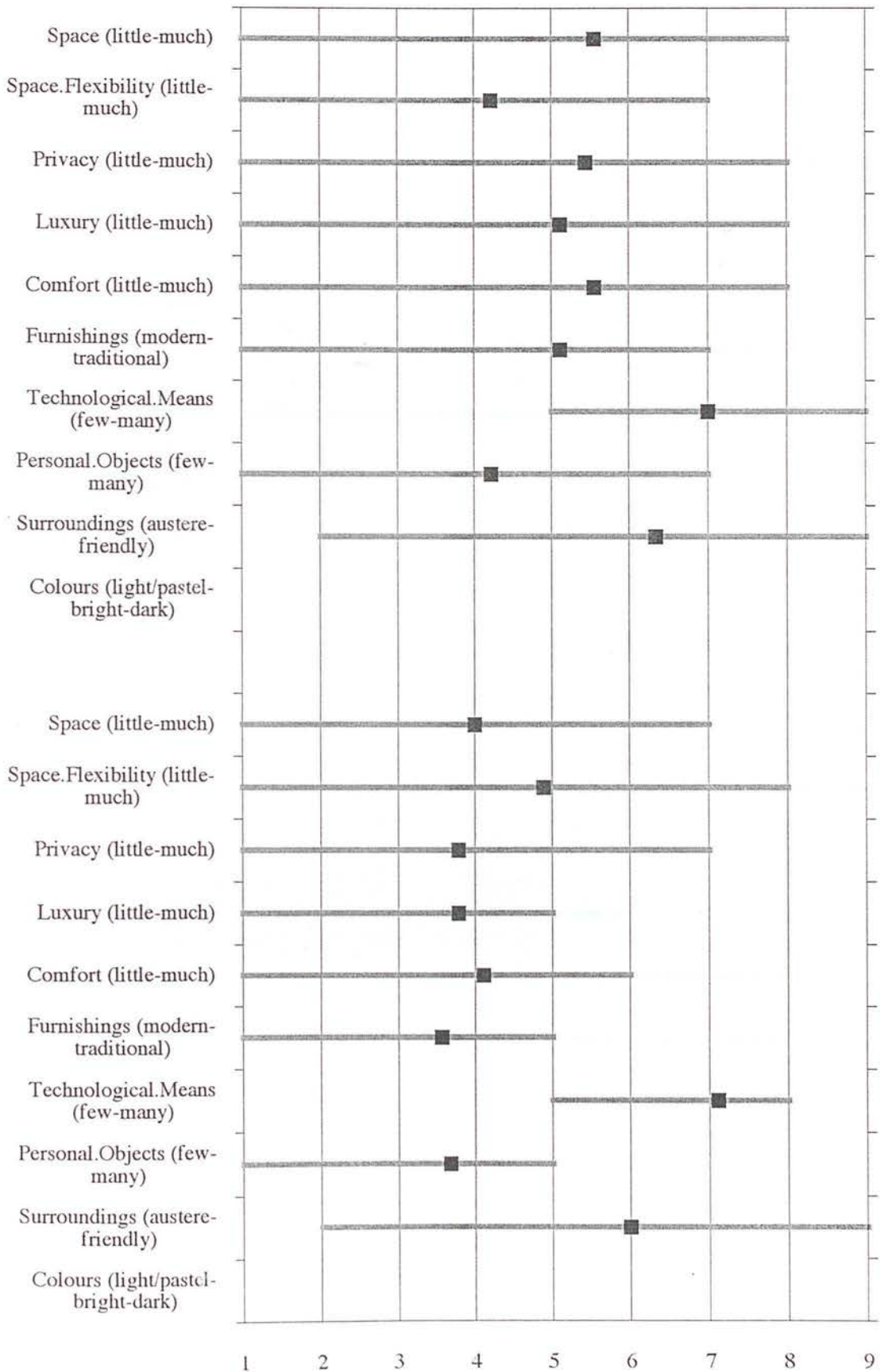


Chart.10.5

Means to Differentiate Hierarchical Levels in German Banks



Employees of High Hierarchical Level (Managers)

Employees of Low Hierarchical Level (Clerks)

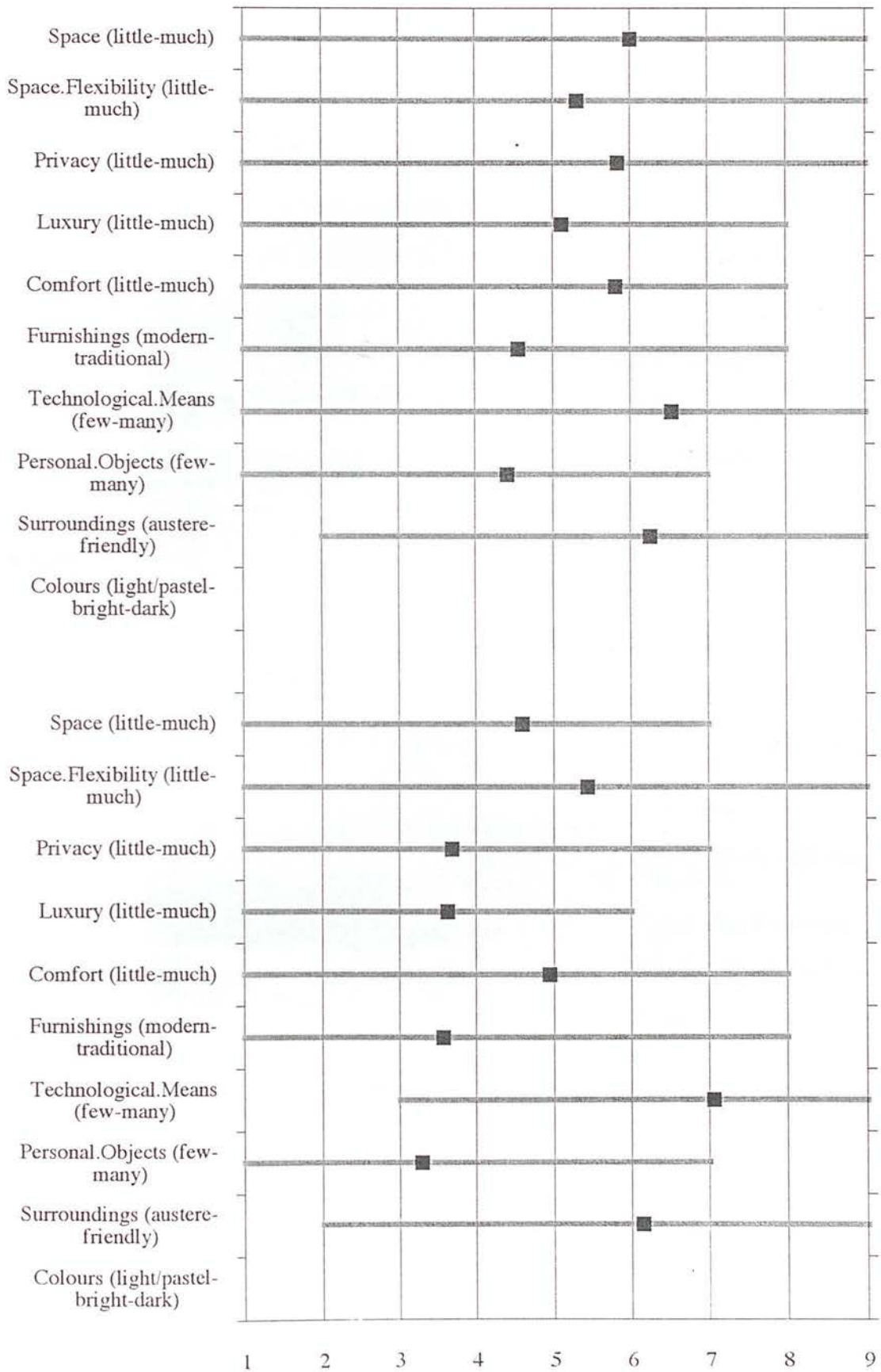


Chart.10.6

Means to Differentiate Hierarchical Levels in Banks

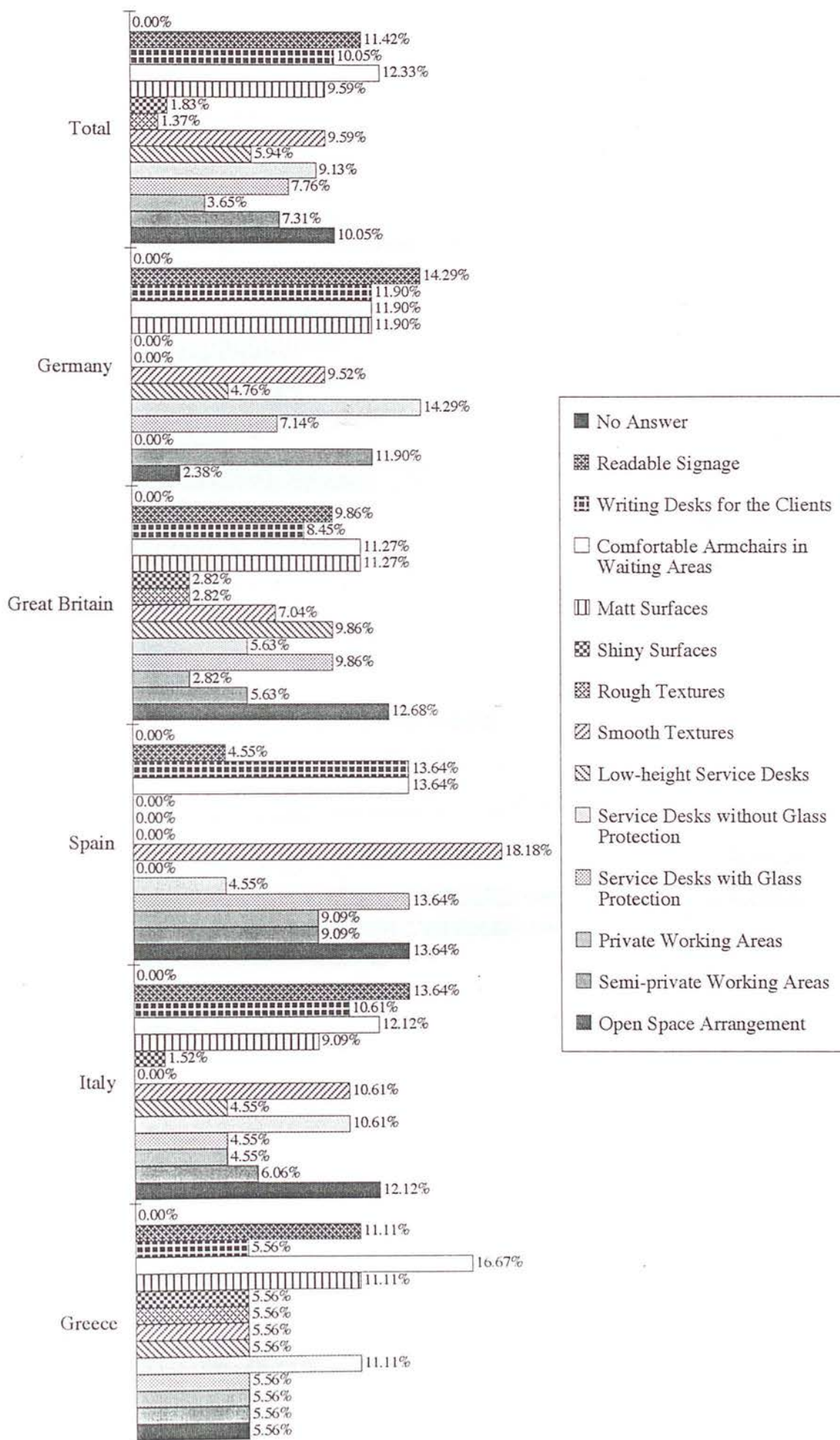


Chart.11.1

Statements Representing the Policy about Working Areas

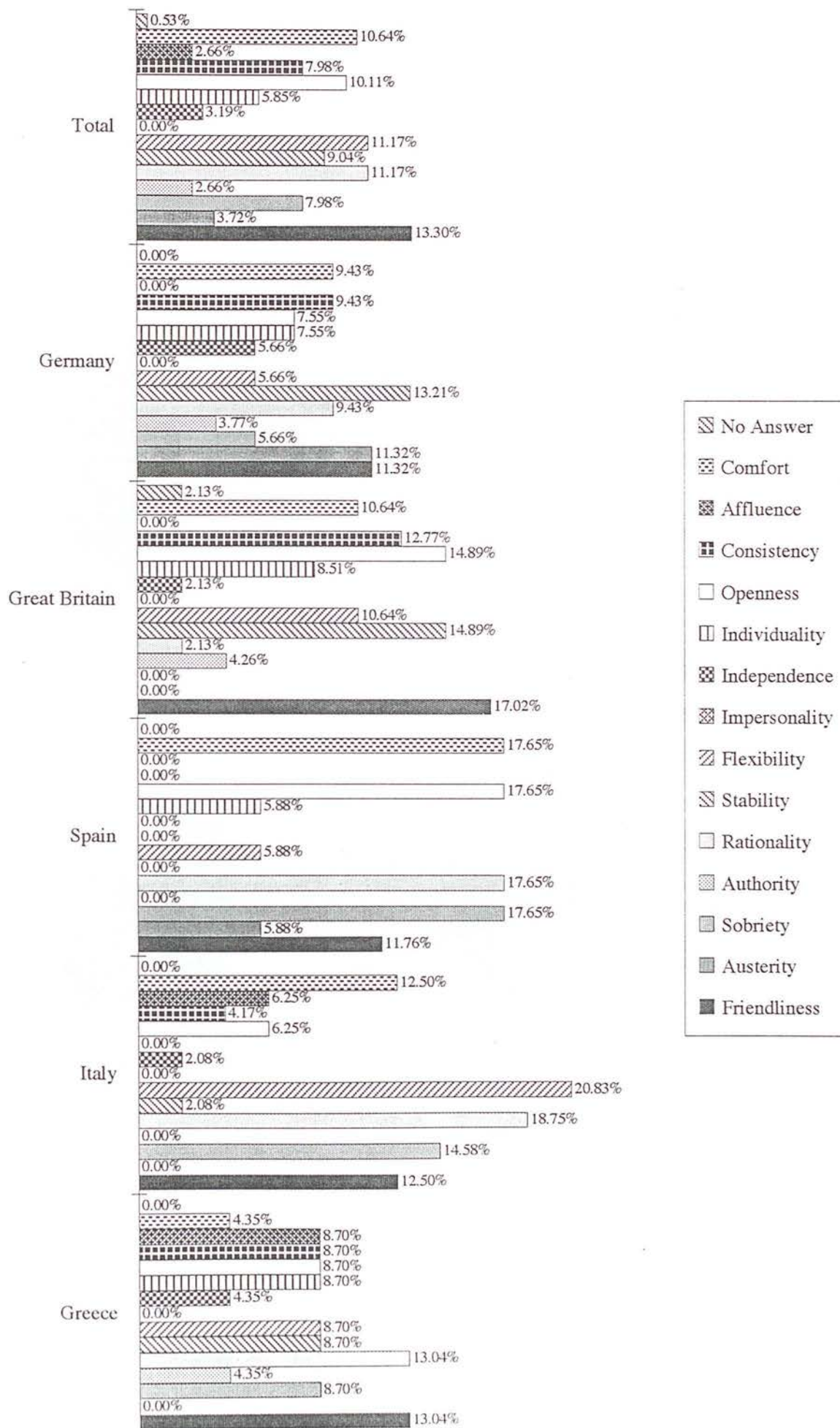


Chart.11.2

Concepts Reflected by the Banks' Policy about Working Areas



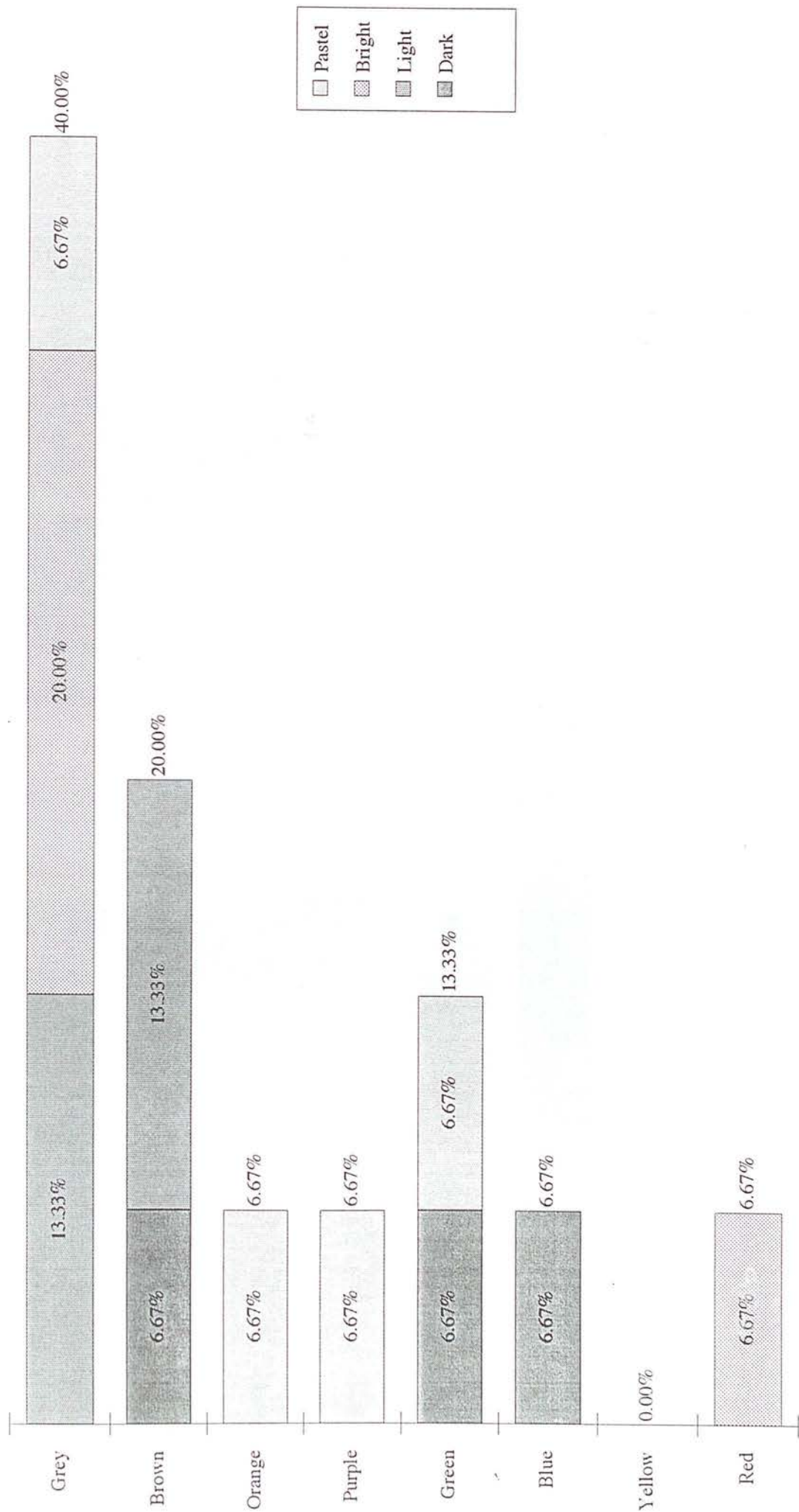


Chart.12.1

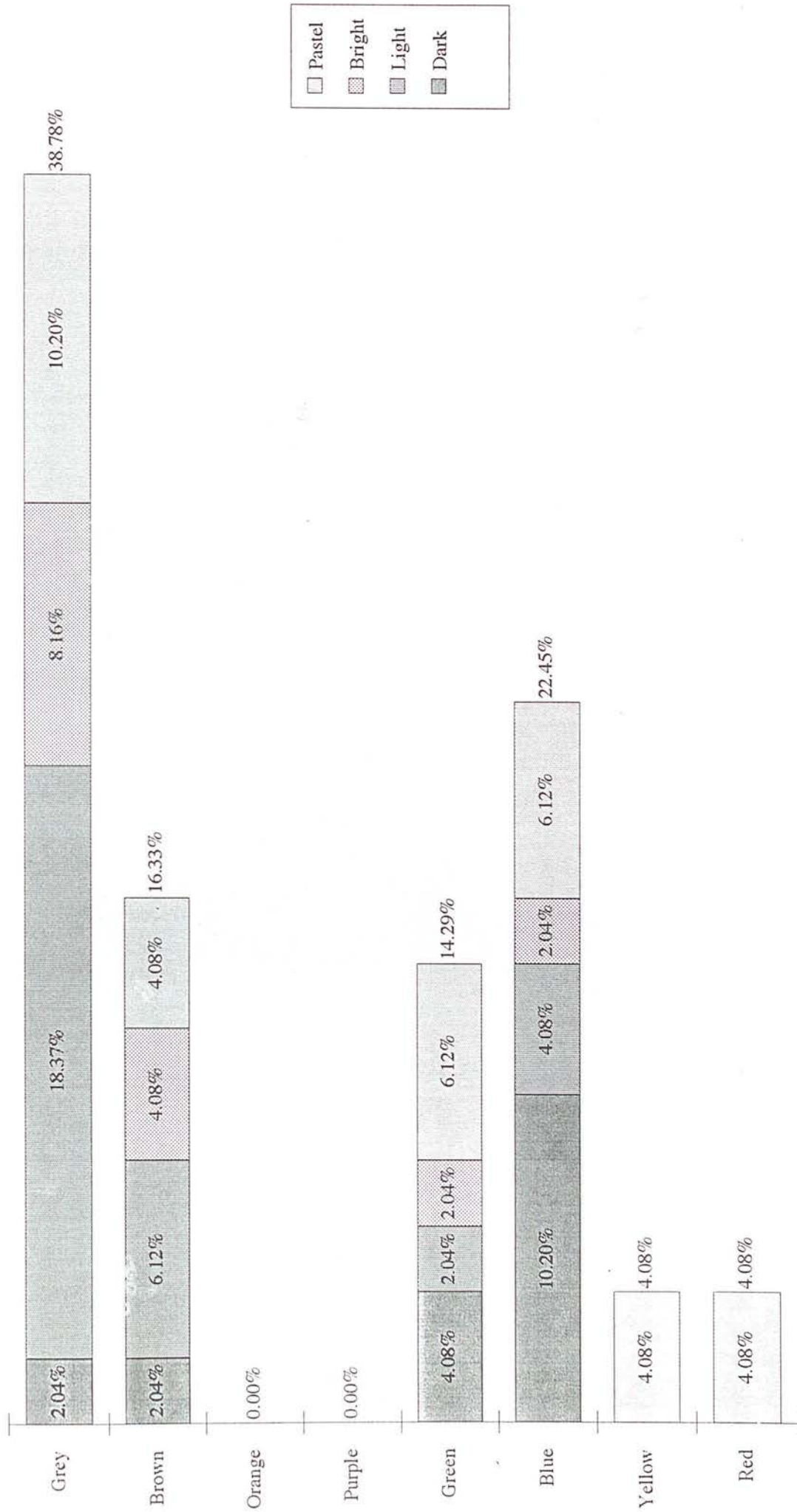


Chart.12.2

Colour Ranges used in Italian Banks

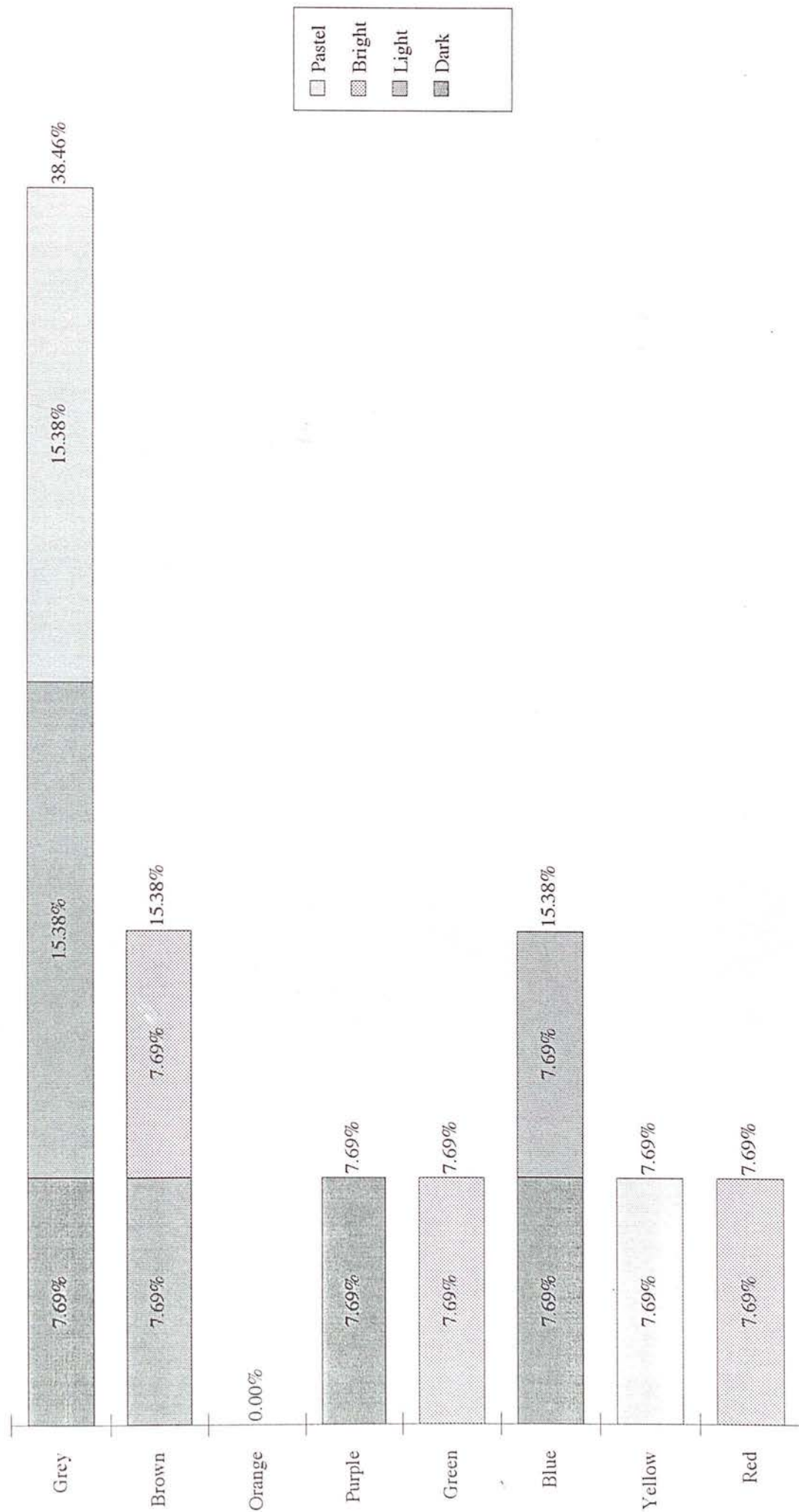


Chart.12.3



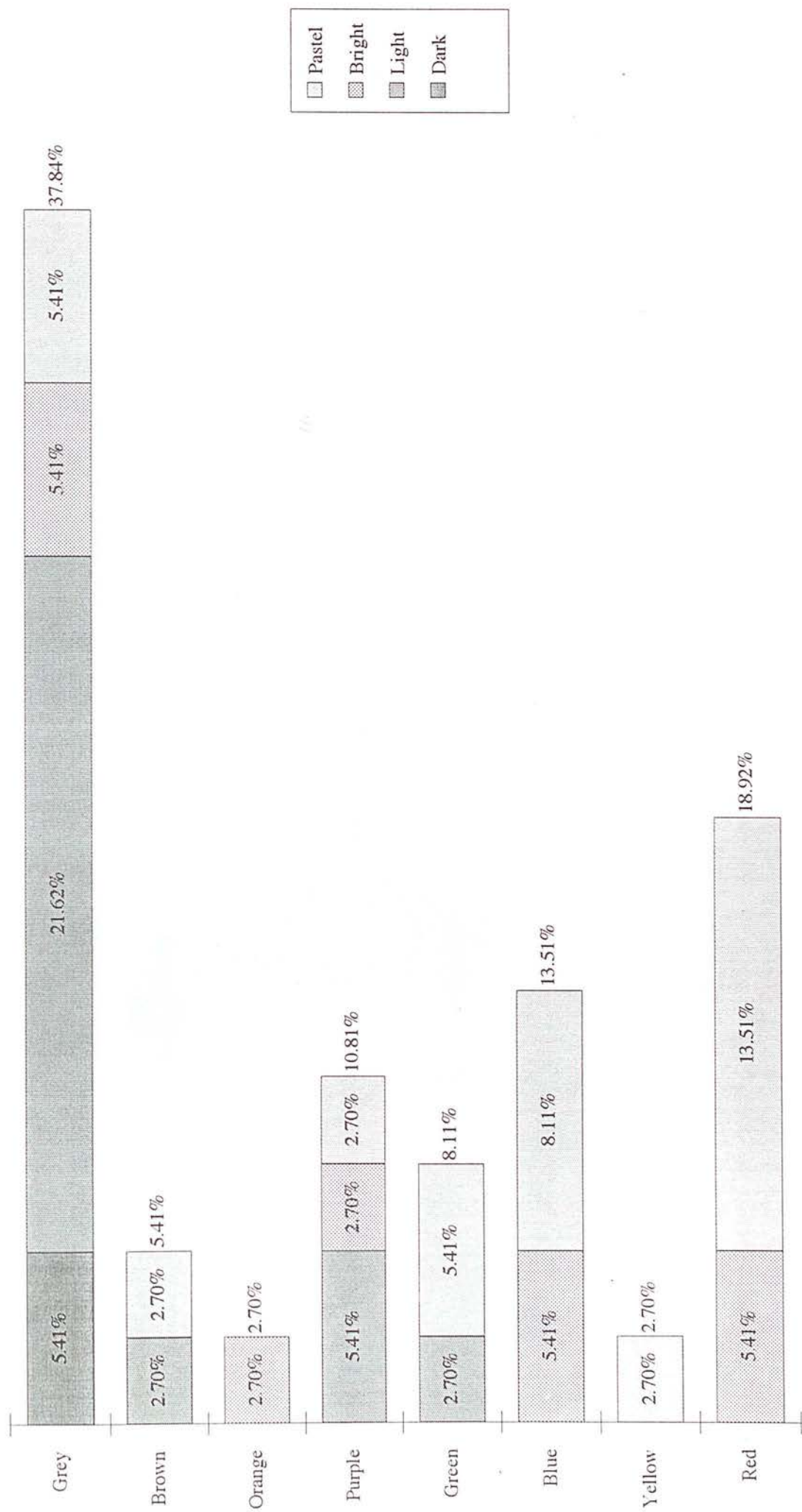


Chart.12.4

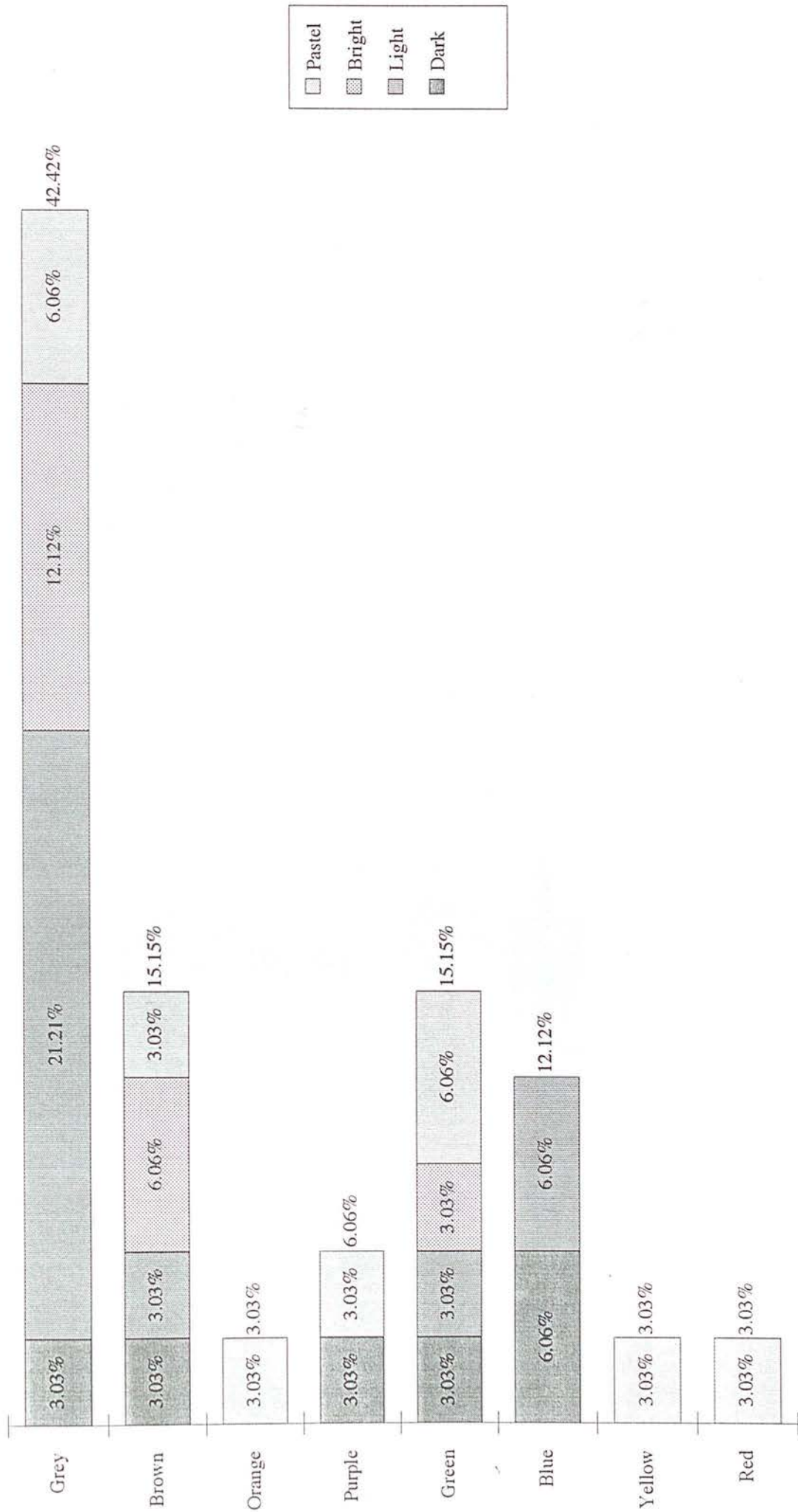


Chart.12.5

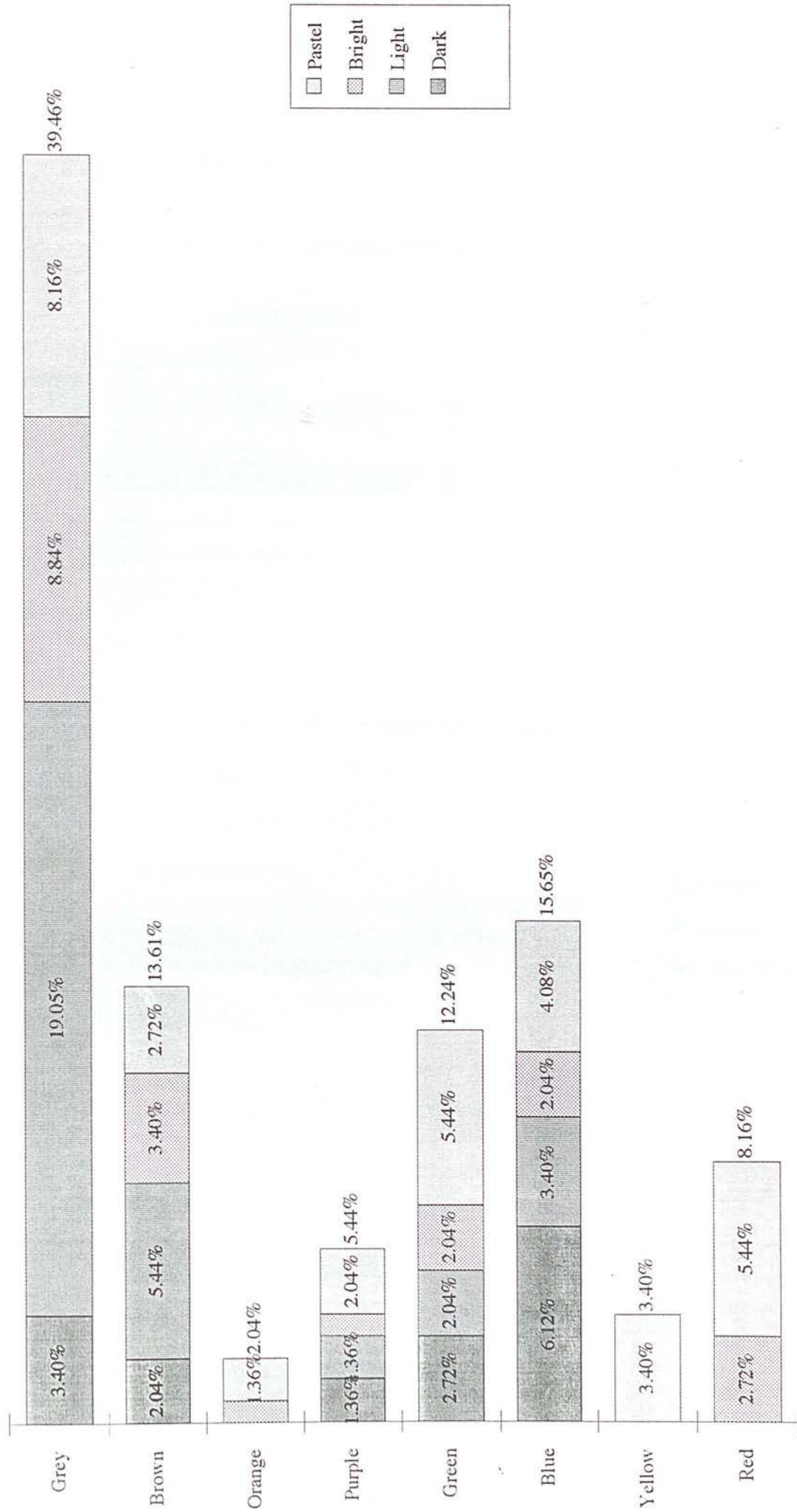


Chart 12.6



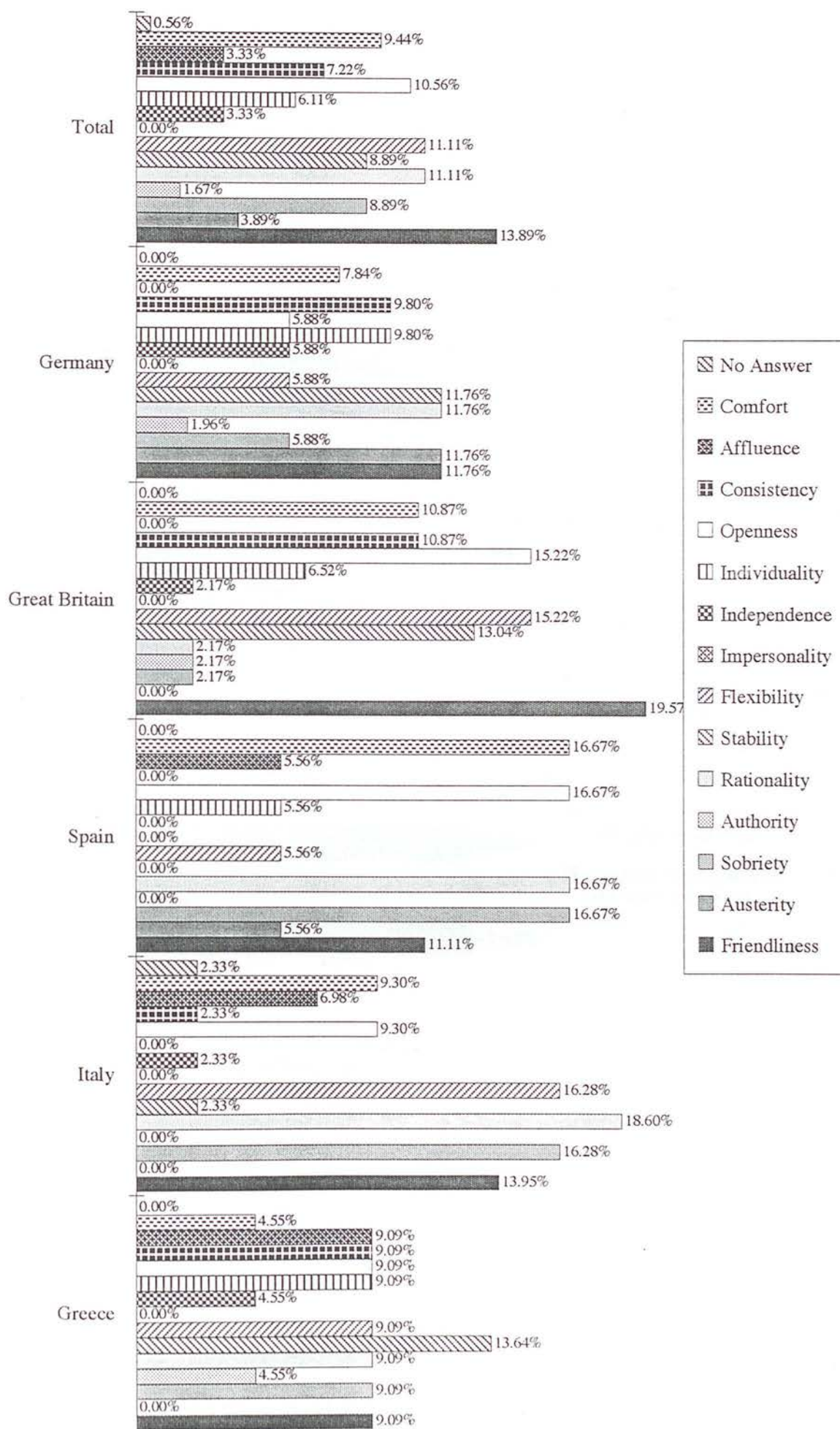


Chart.12.7

Concepts reflected by the Characterization about Colours

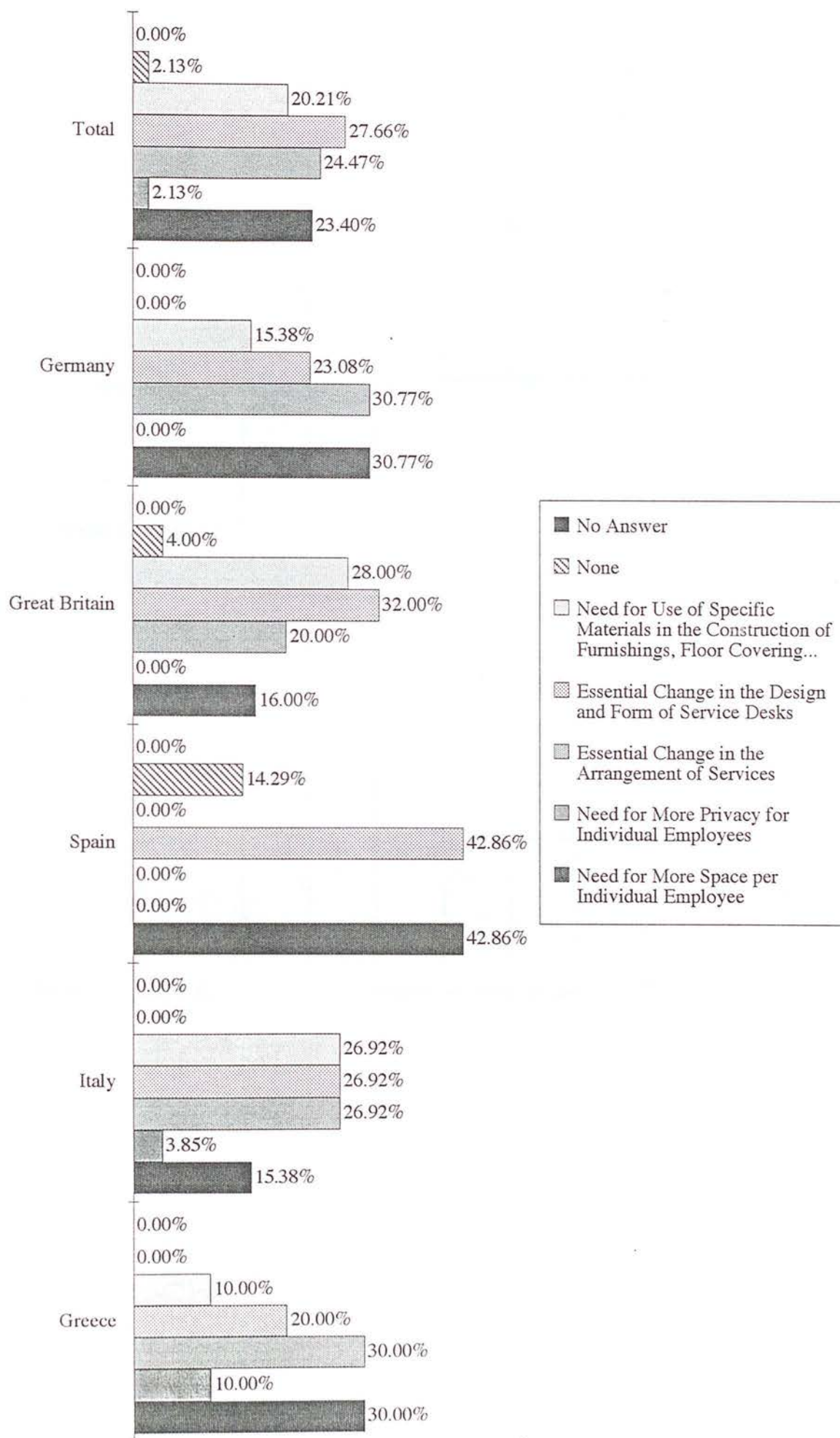


Chart.13 Changes in the Working Environment because of the Introduction of Computers

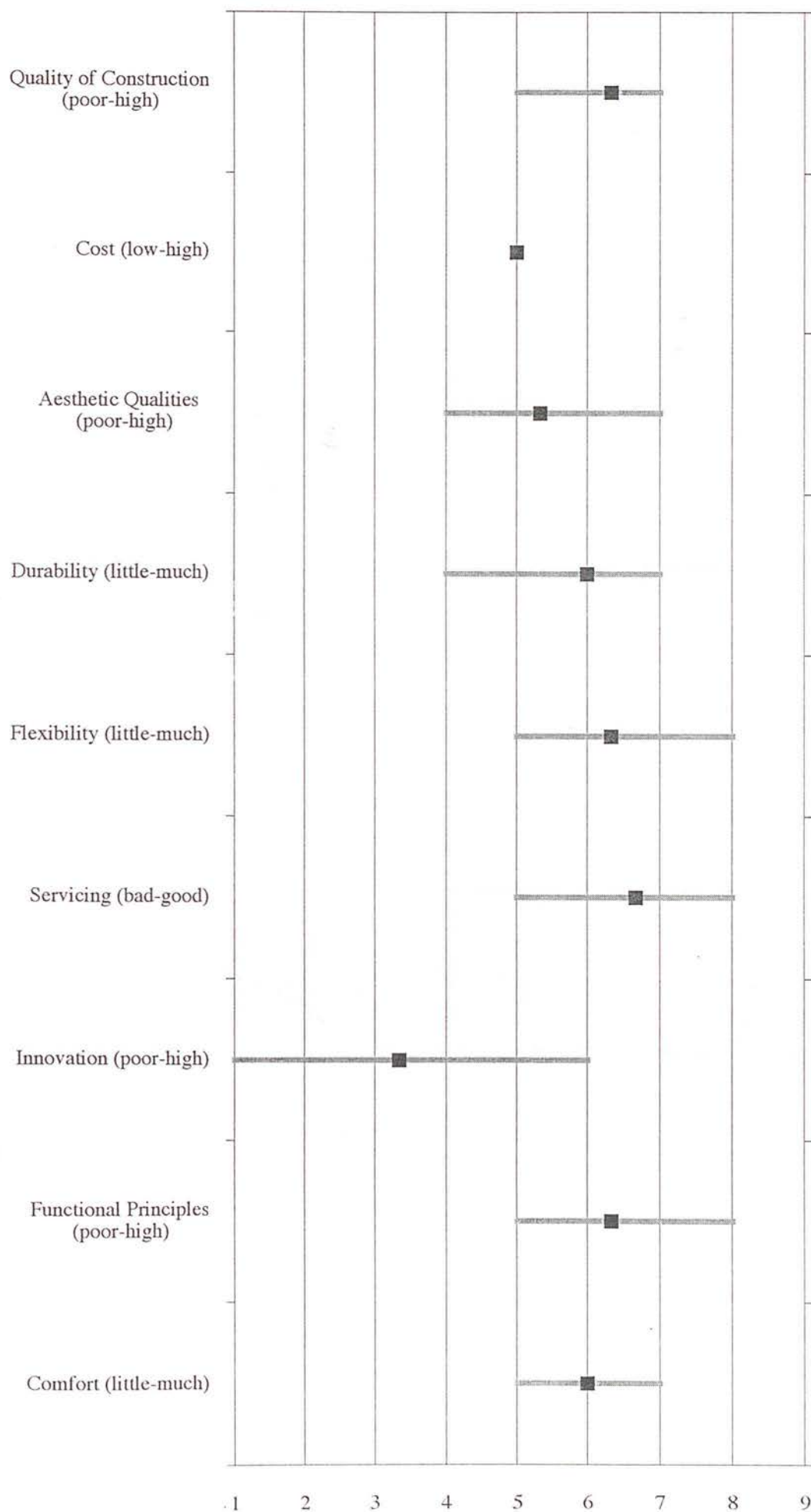


Chart.14.1 Office Furniture in Contemporary Market in Greece



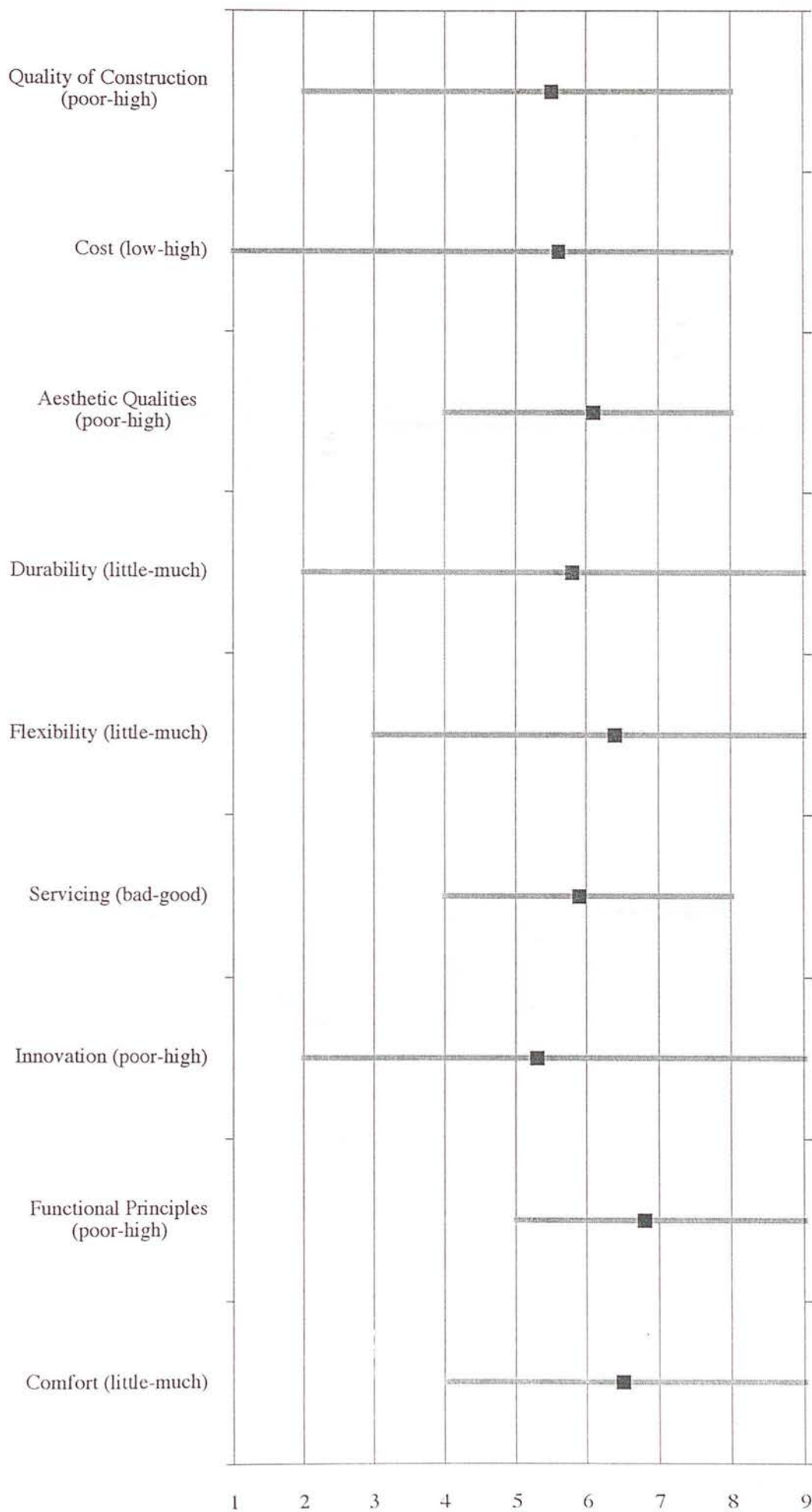


Chart.14.2 Office Furniture in Contemporary Market in Italy

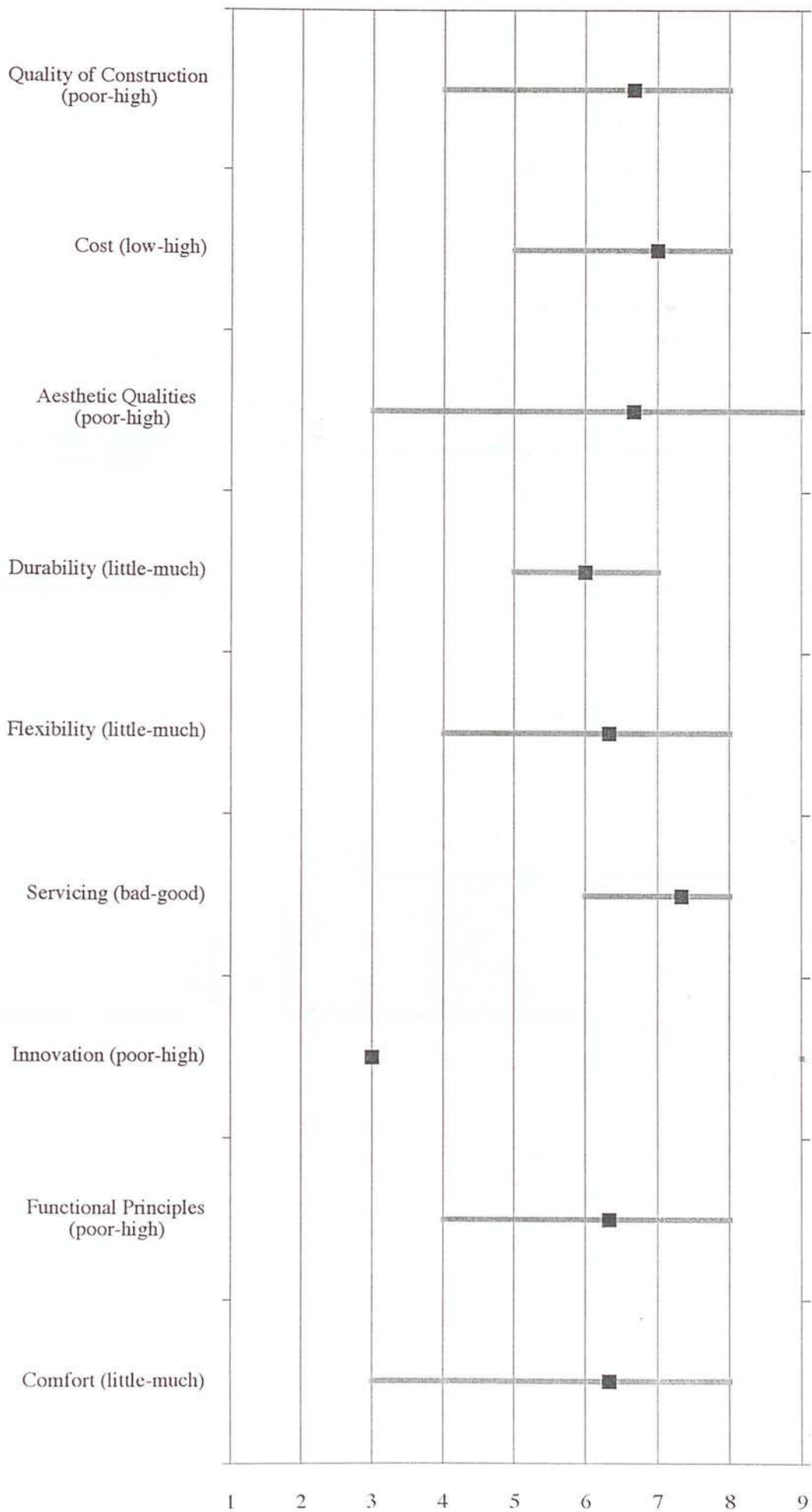


Chart. 14.3 Office Furniture in Contemporary Market in Spain

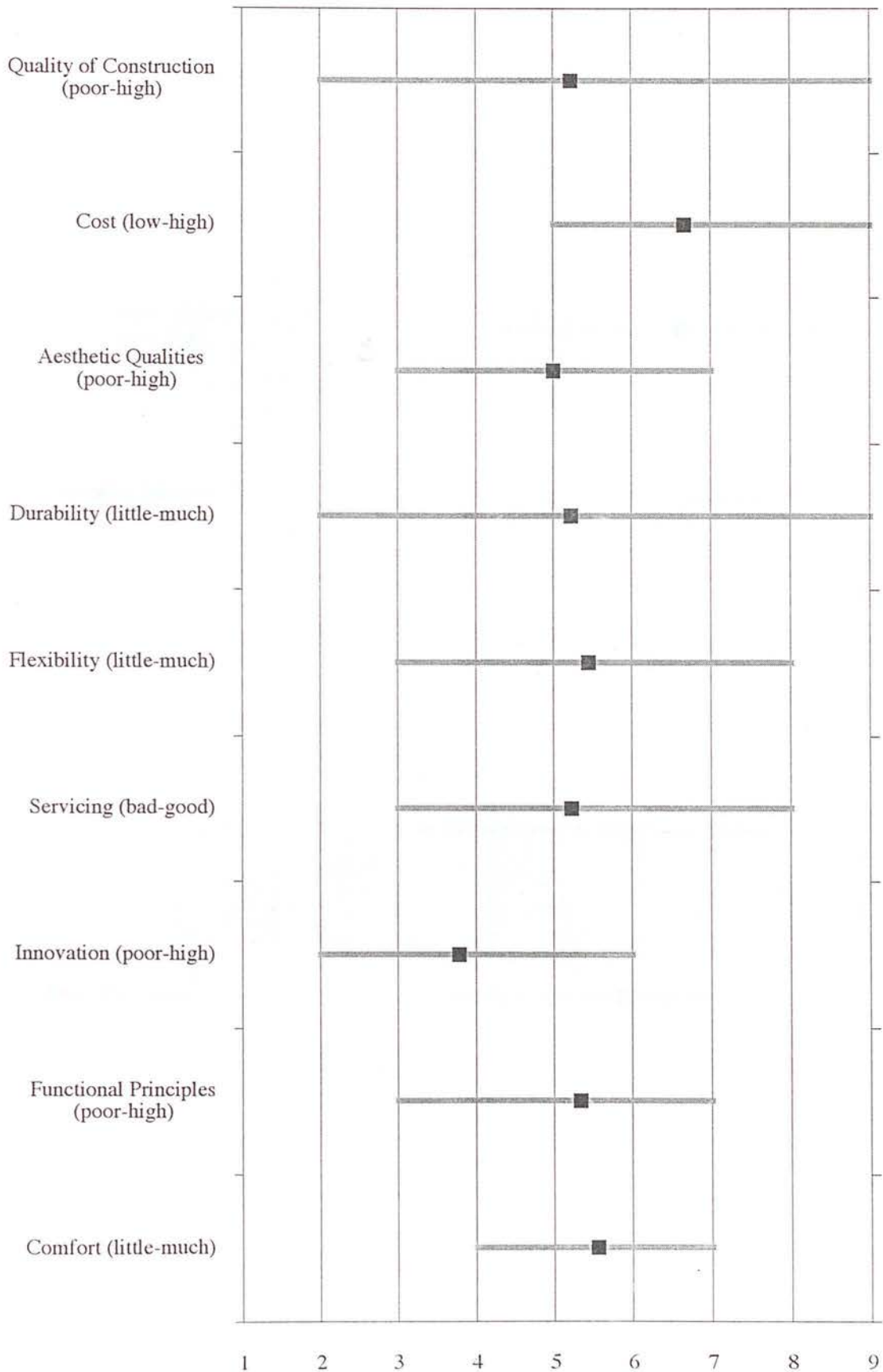


Chart.14.4 Office Furniture in Contemporary Market in Britain



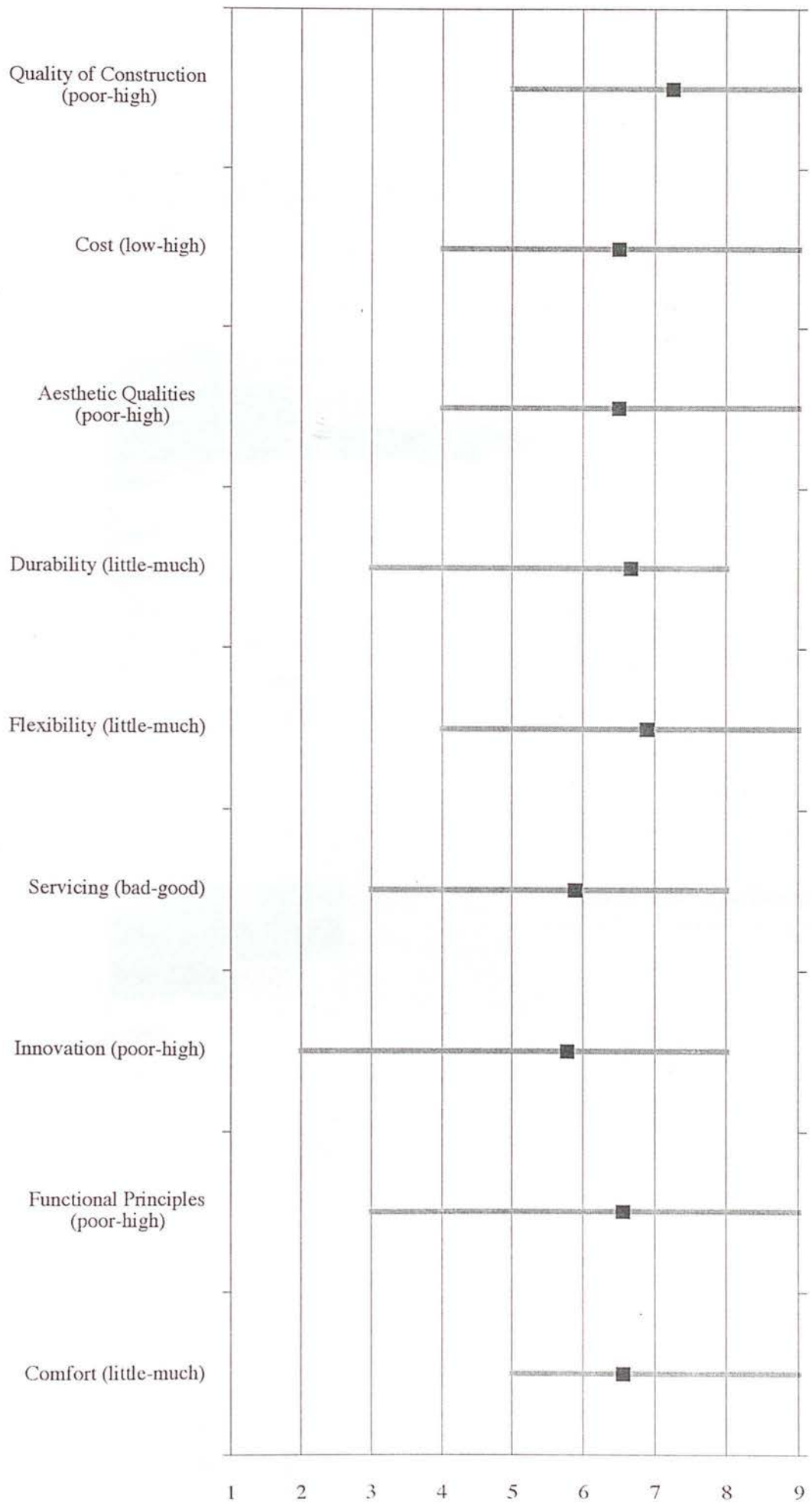


Chart.14.5 Office Furniture in Contemporary Market in Germany

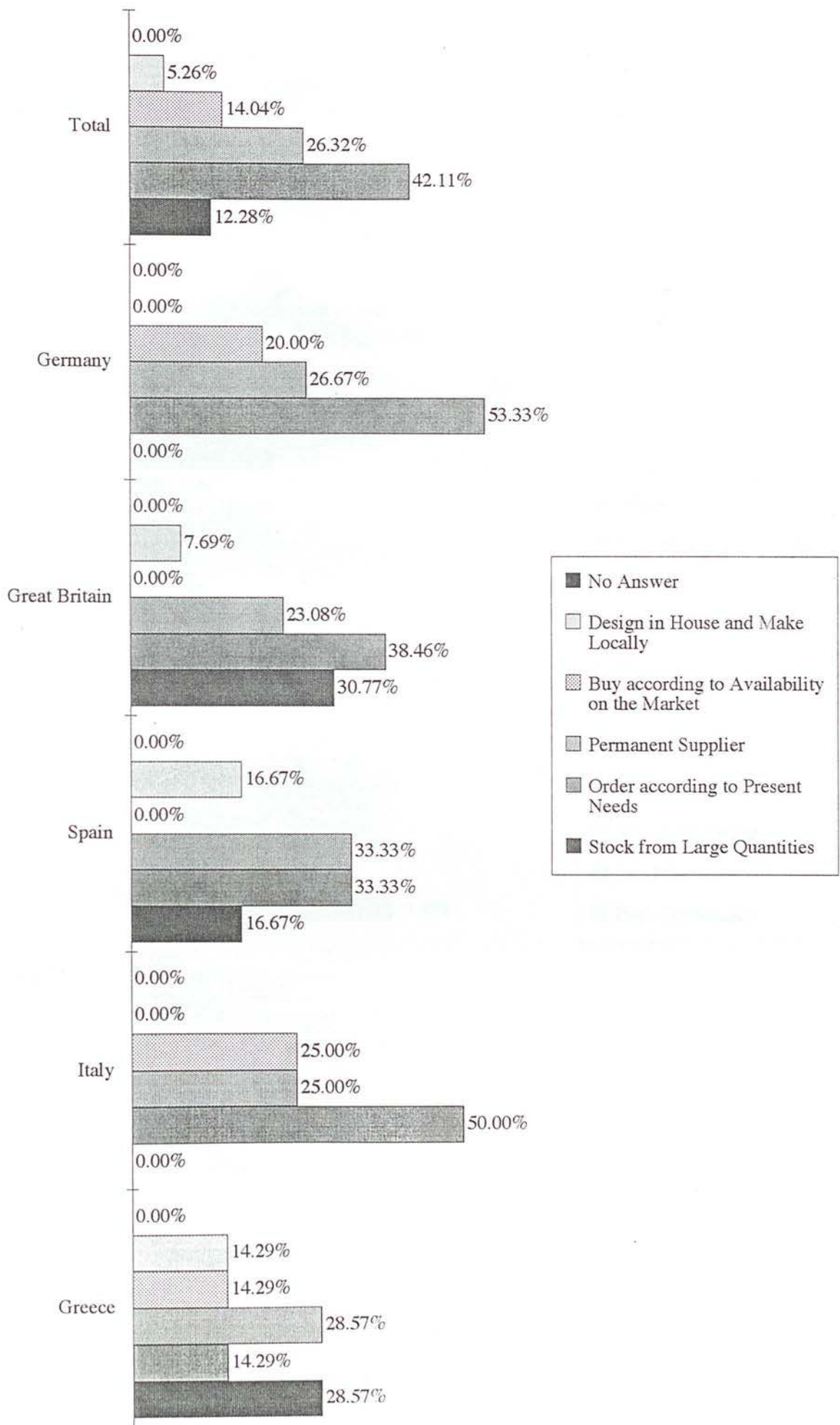


Chart.15

Statements Representing Policy about Office Furniture Supplies

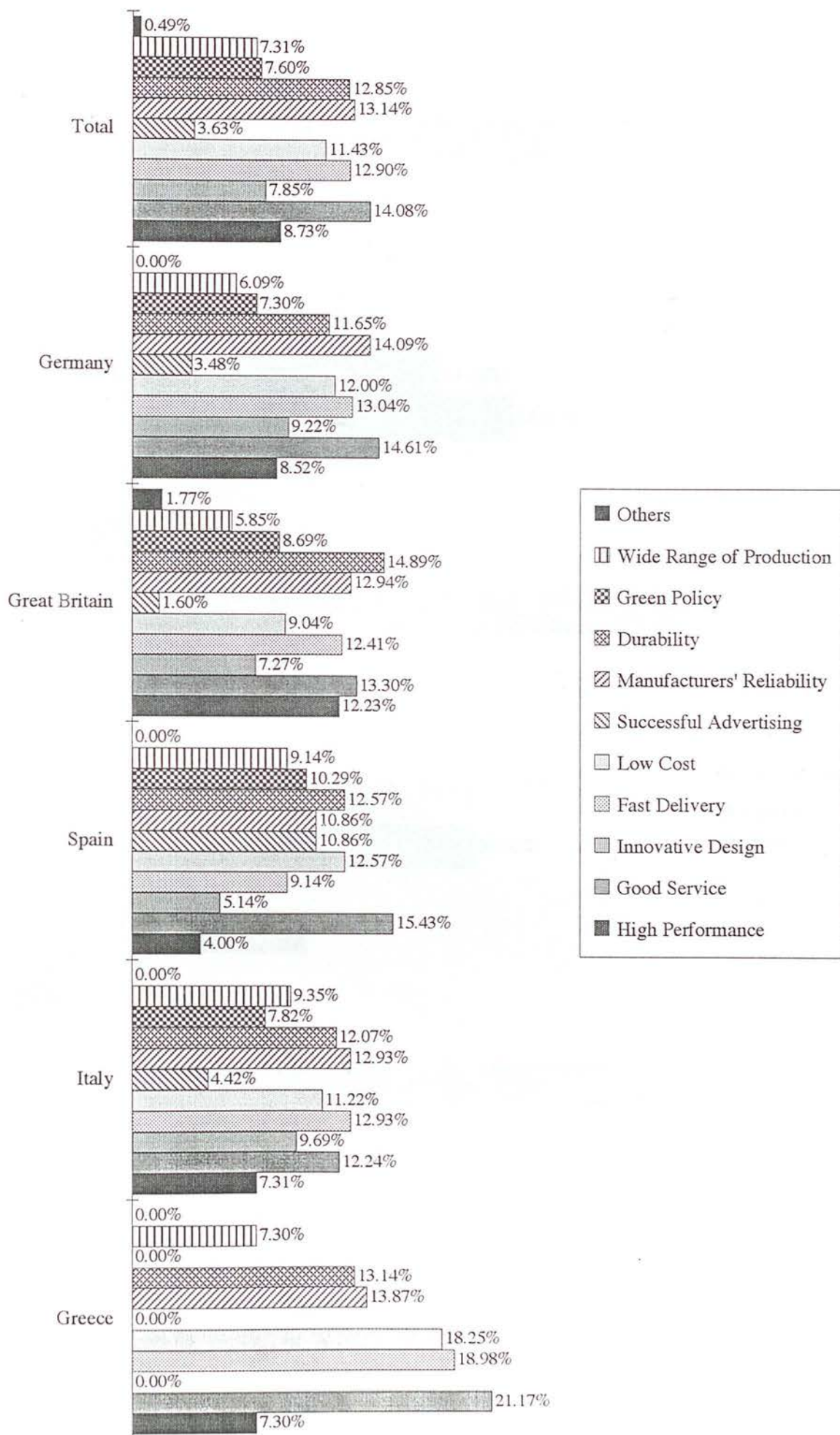


Chart.16 Importance of Factors that lead to the Choice of Manufactured Furniture



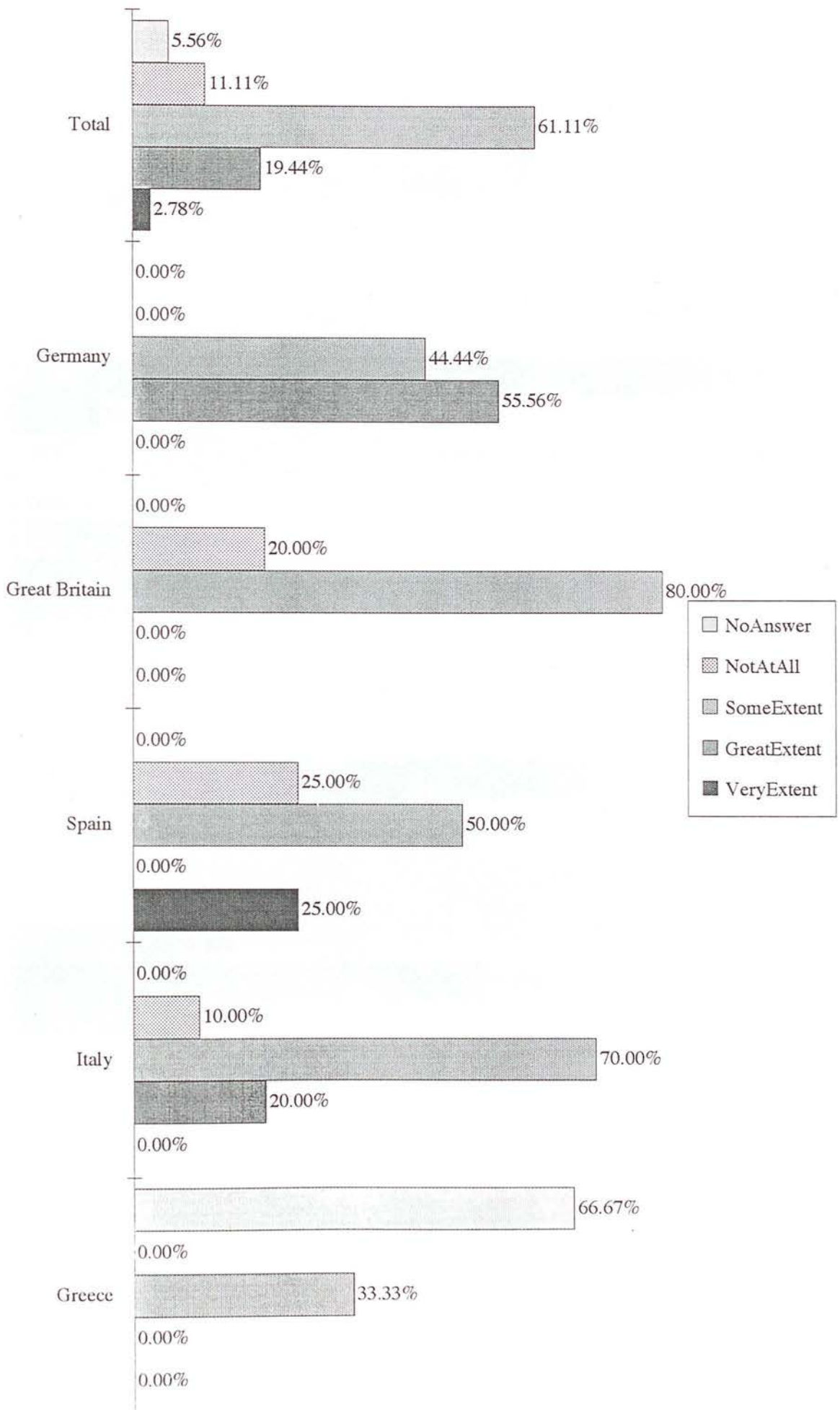


Chart.17.1

Steel Usage in the Design of Banks

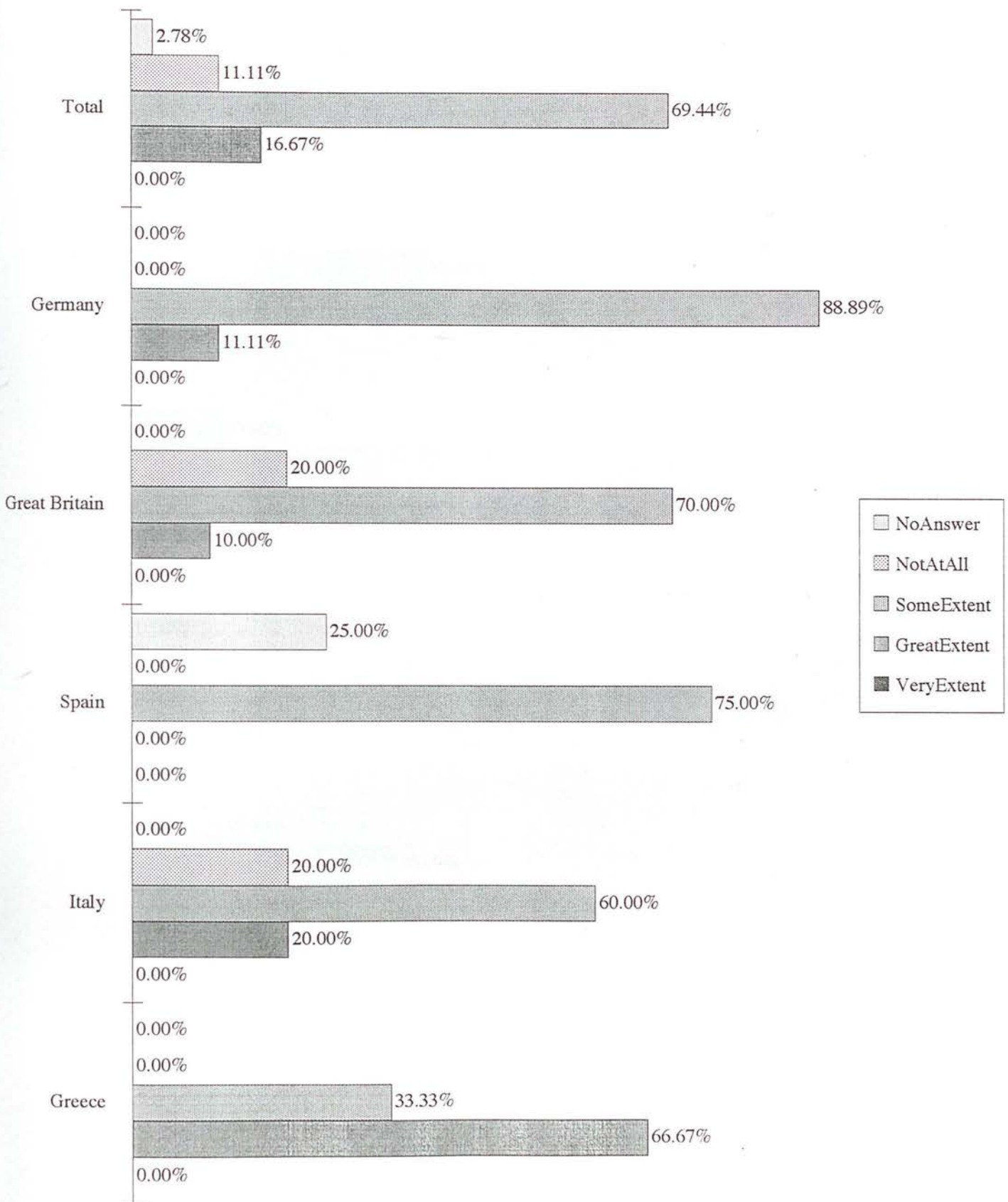


Chart.17.2

Aluminium Usage in the Design of Banks

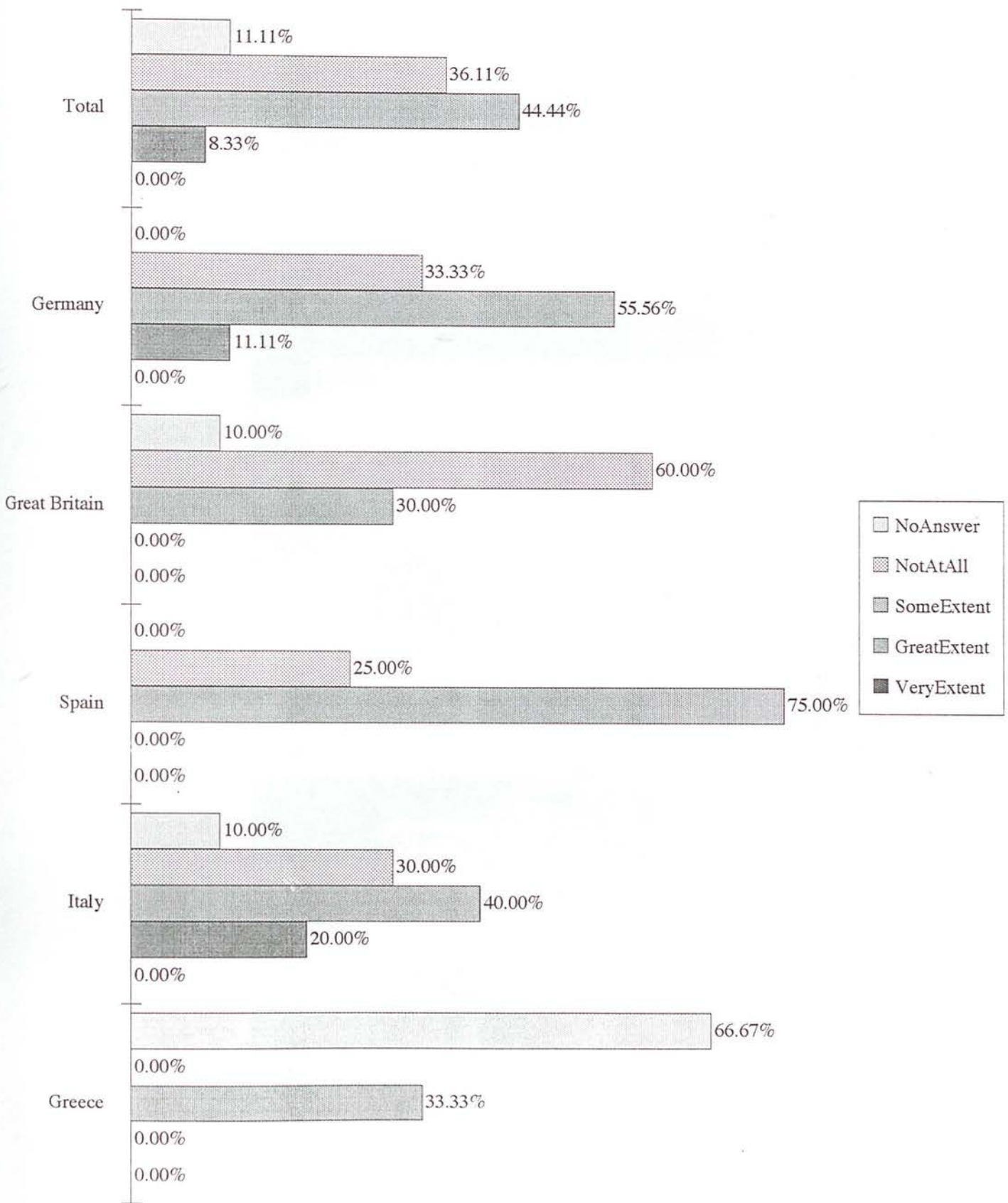


Chart.17.3

Other Metals' Usage in the Design of Banks



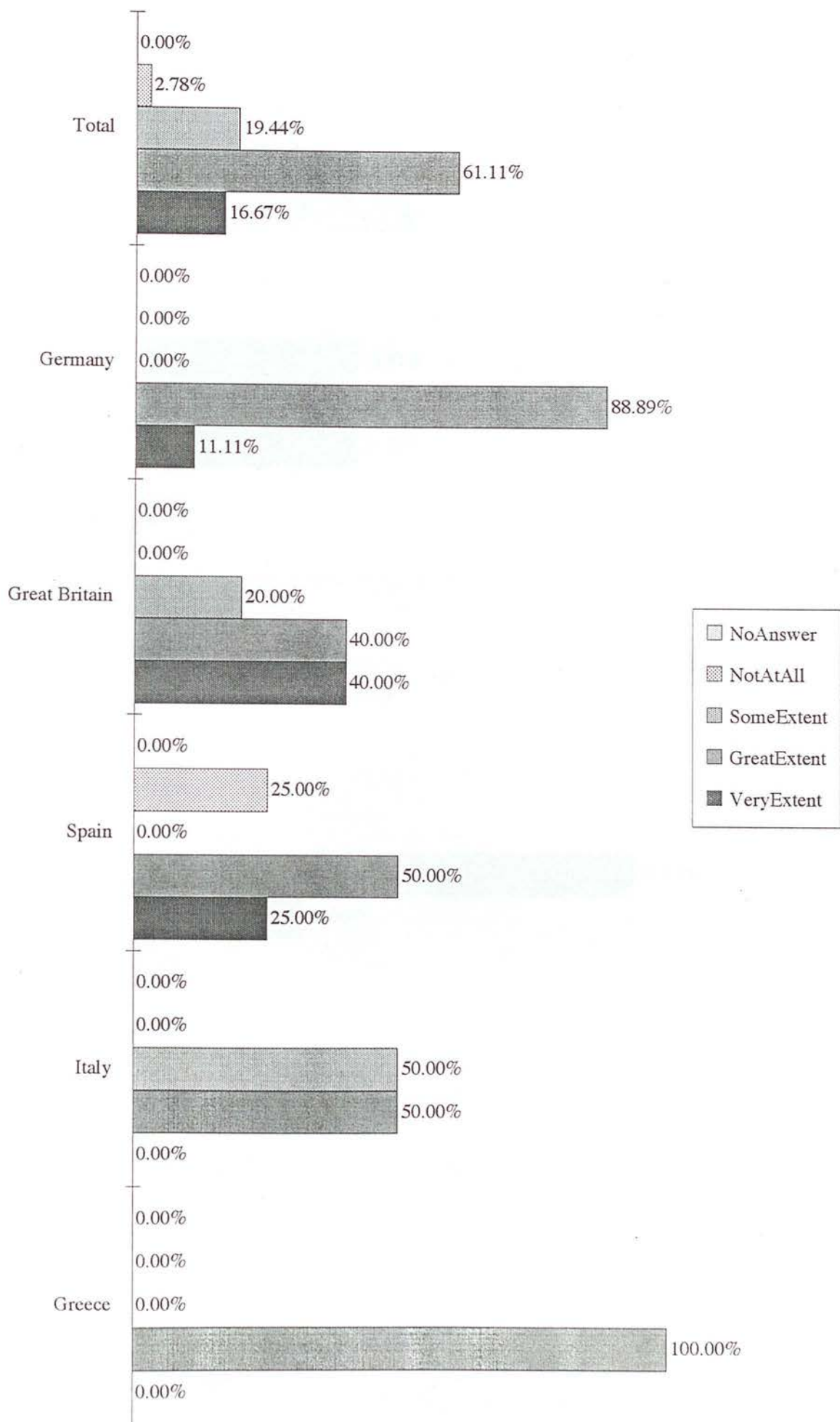


Chart.17.4

Wood Usage in the Design of Banks

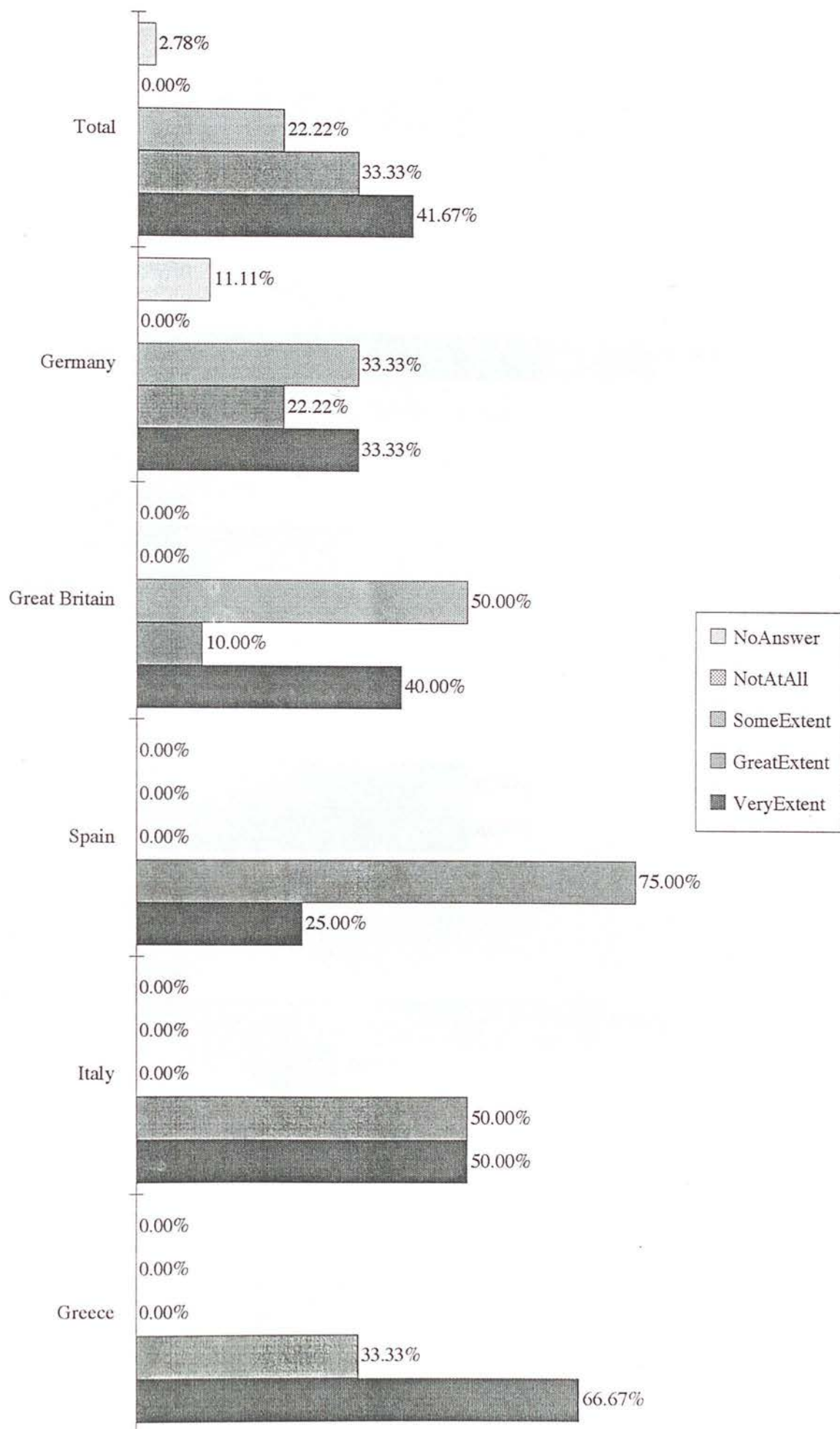


Chart.17.5

Laminates Usage in the Design of Banks

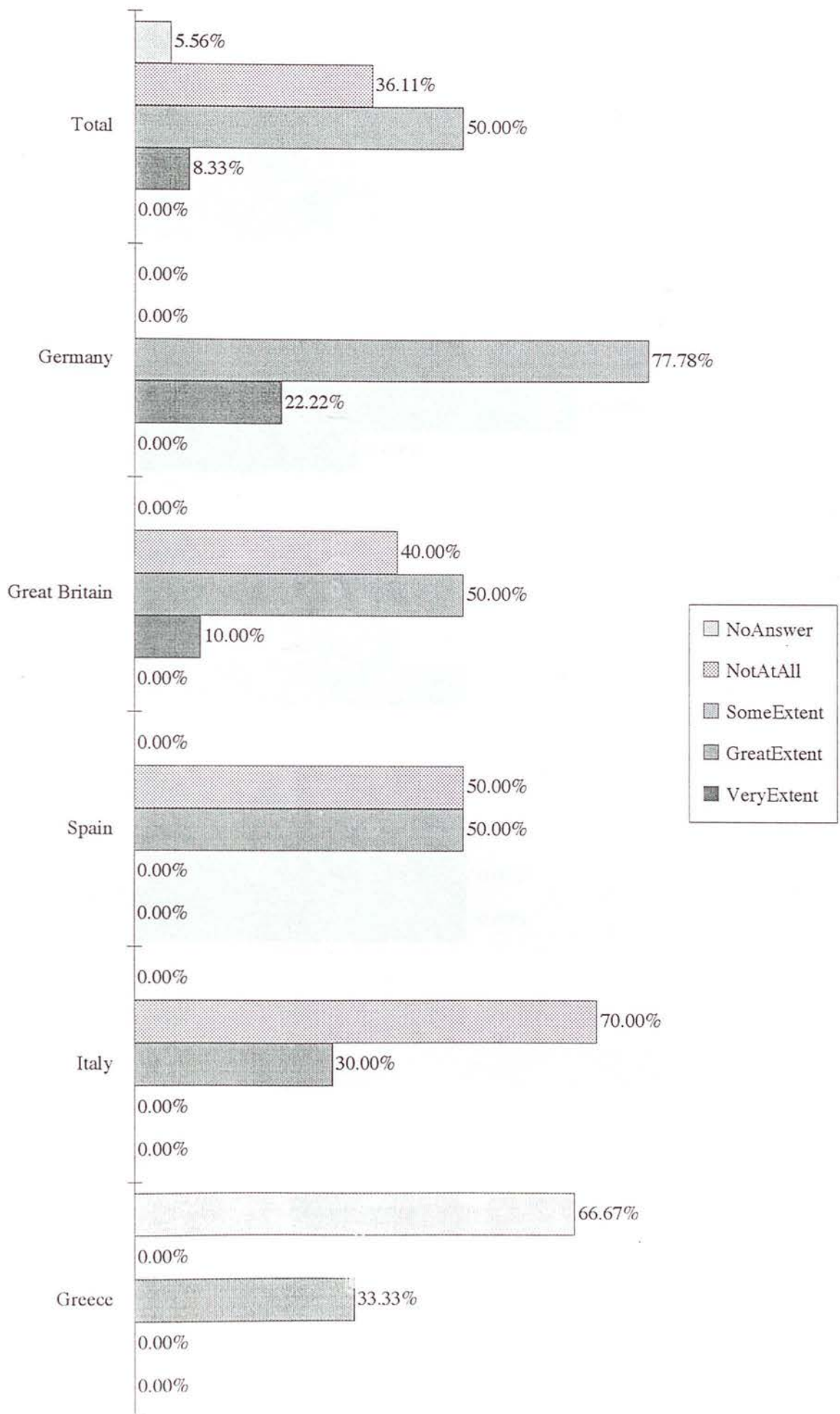


Chart. 17.6

Leather Usage in the Design of Banks



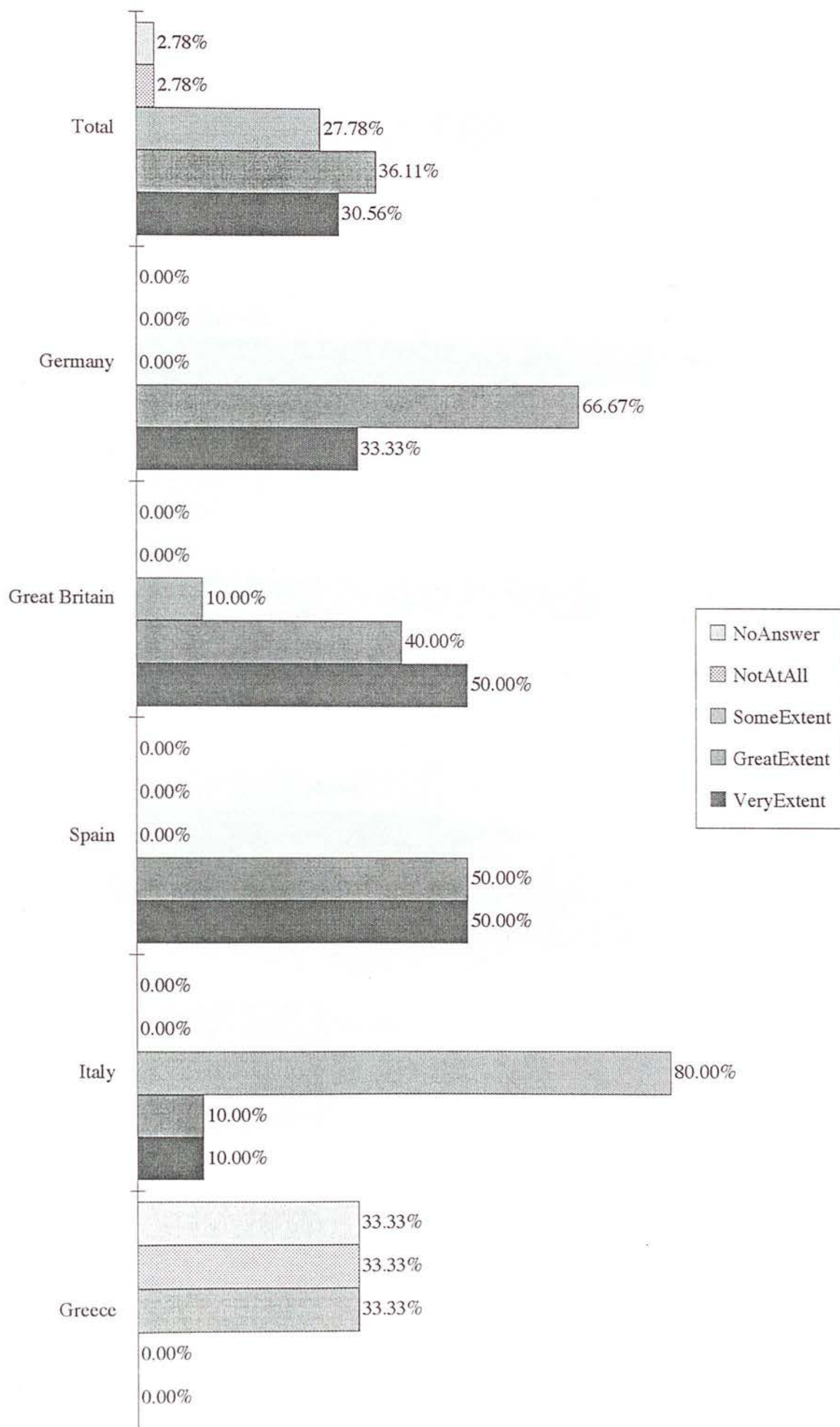


Chart.17.7

Fabrics and Upholstery Usage in the Design of Banks

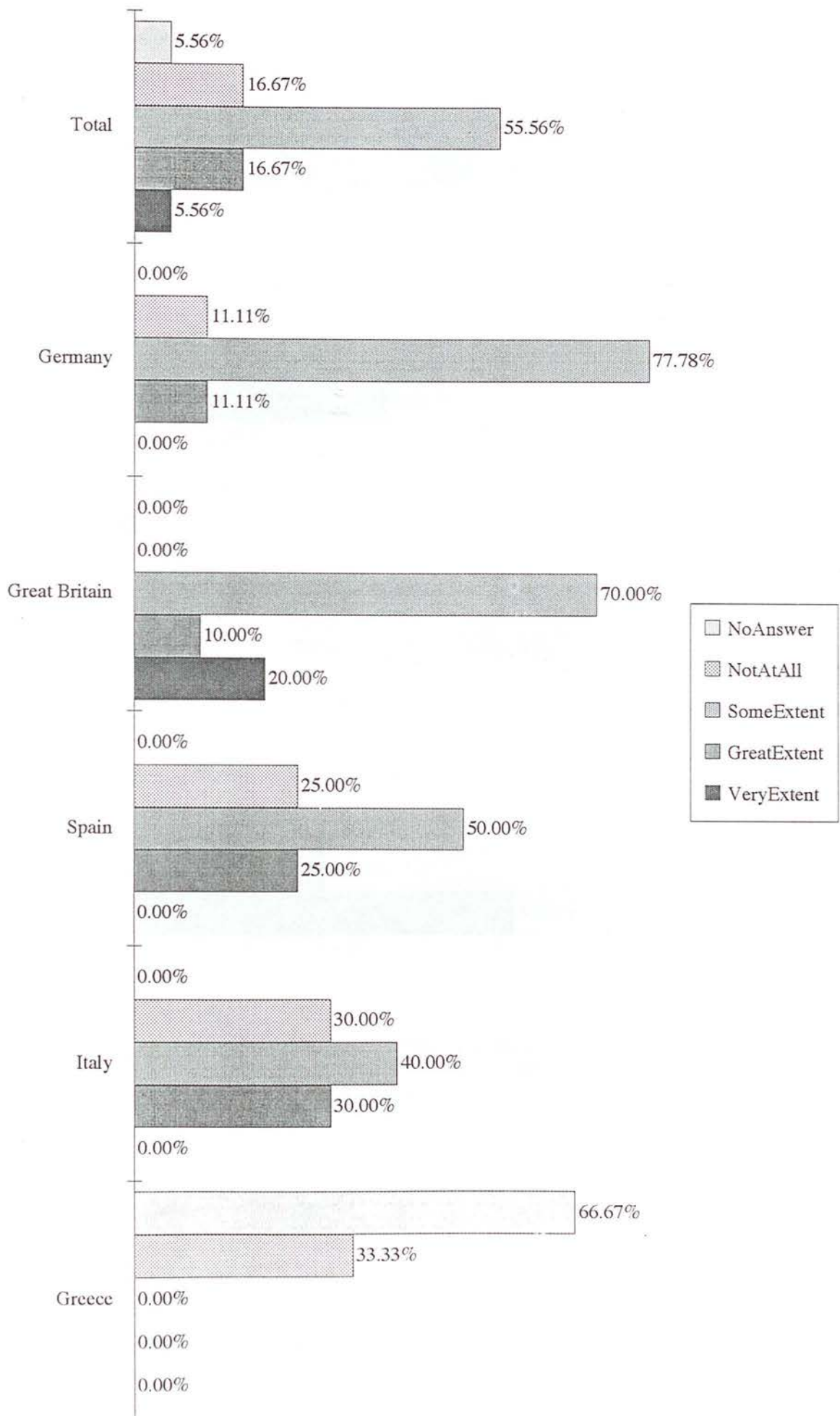


Chart.17.8

Plastics Usage in the Design of Banks

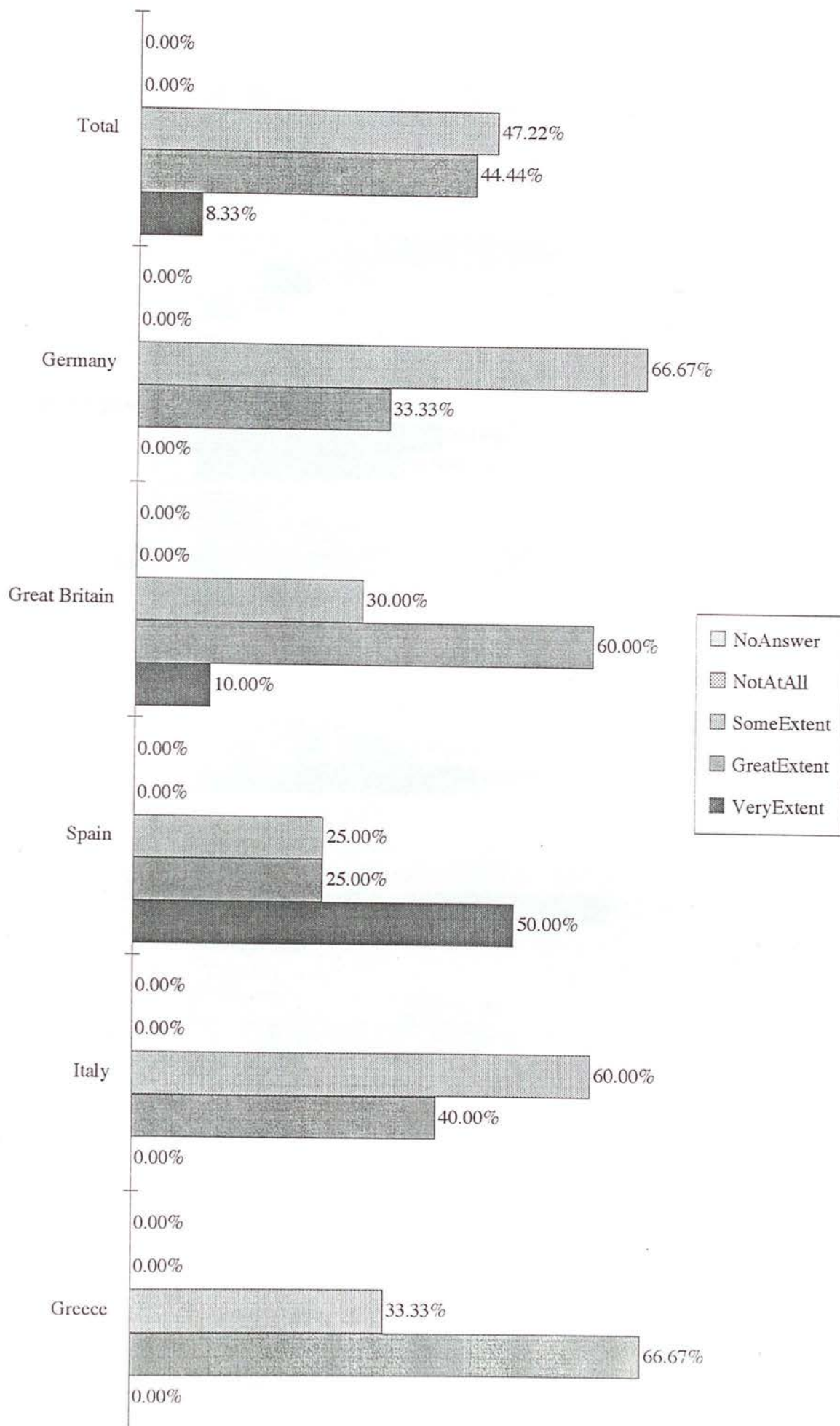


Chart.17.9

Glass Usage in the Design of Banks



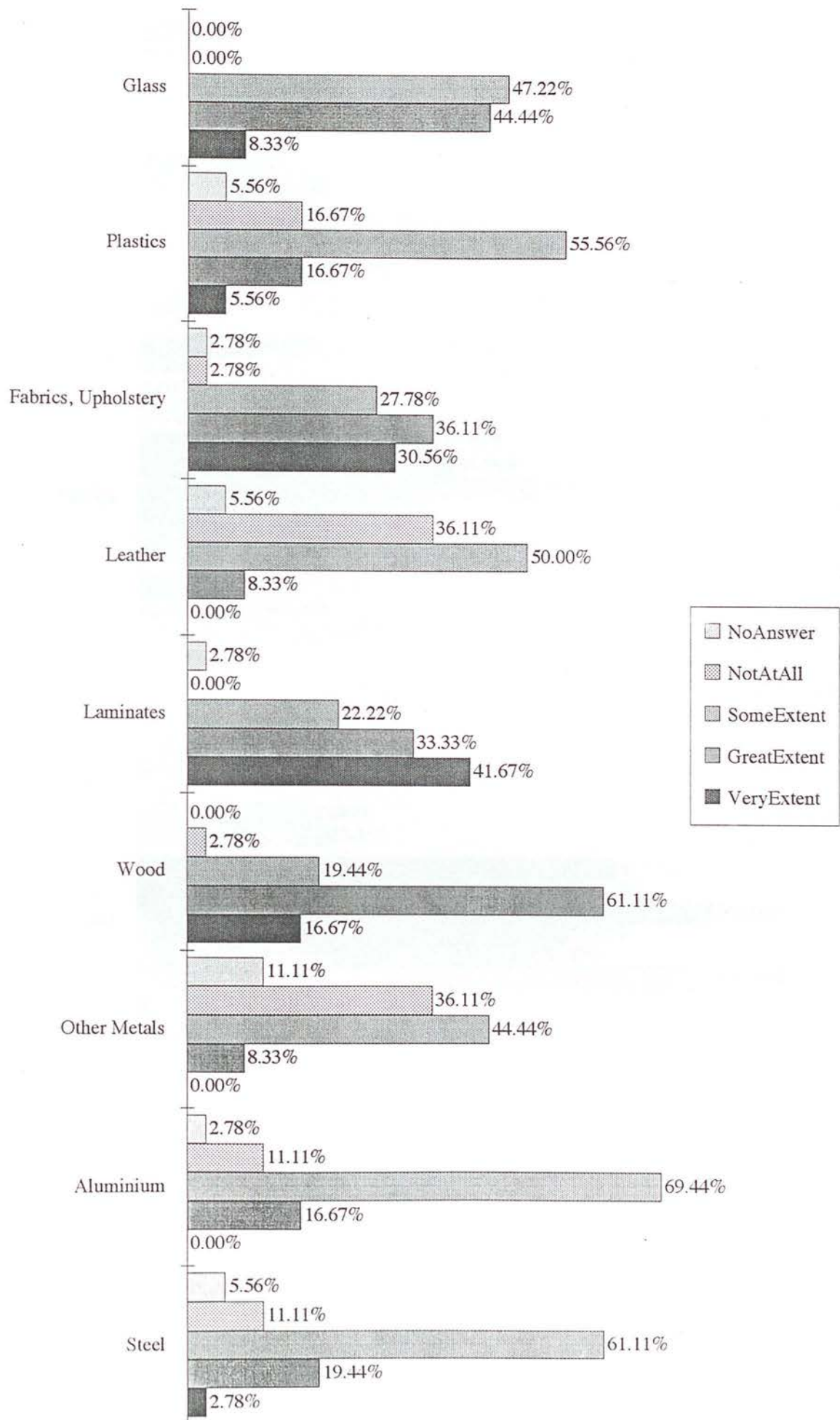


Chart.17.10

Materials Usage in the Design of Banks

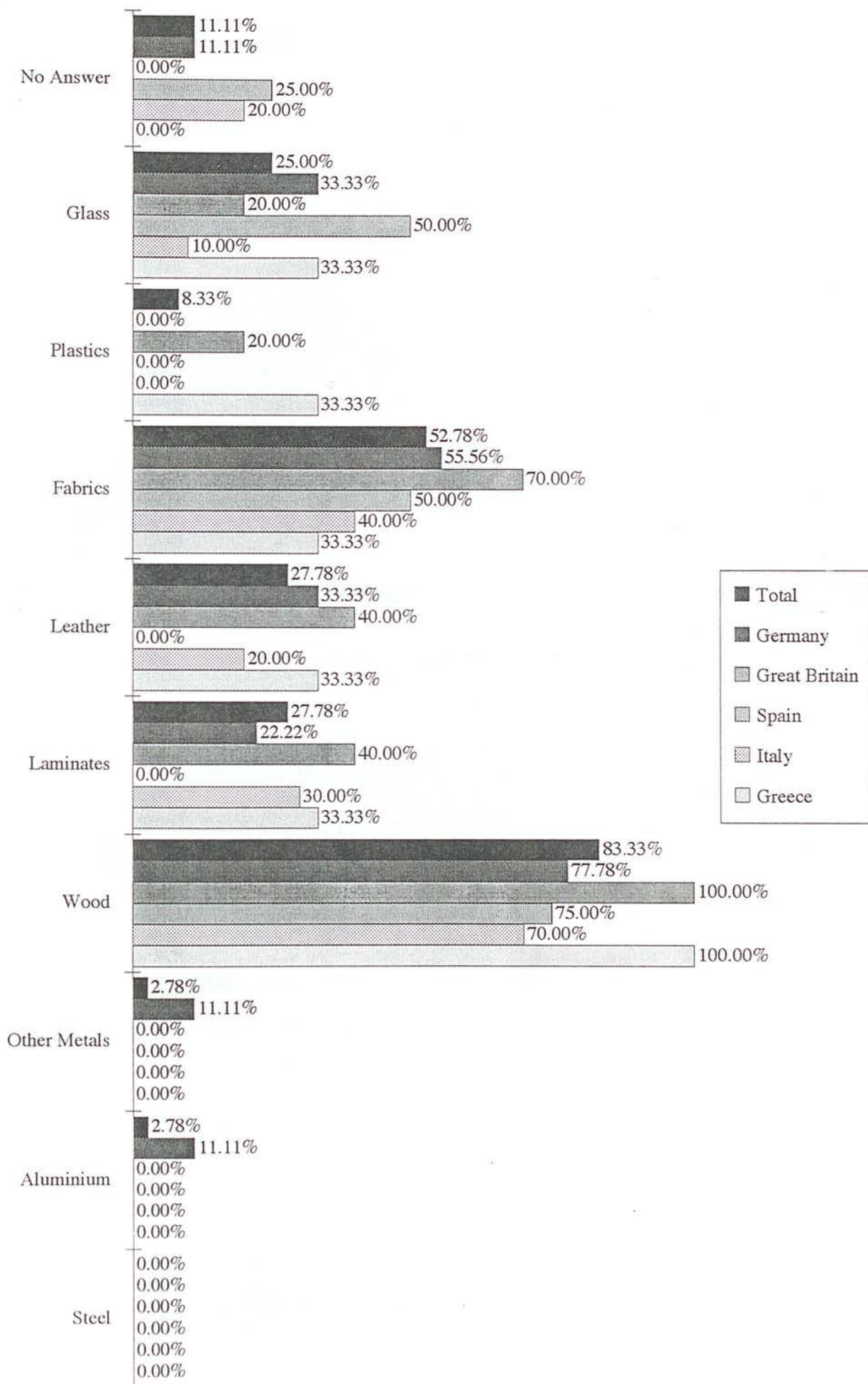


Chart.18.1

Materials related to Friendliness

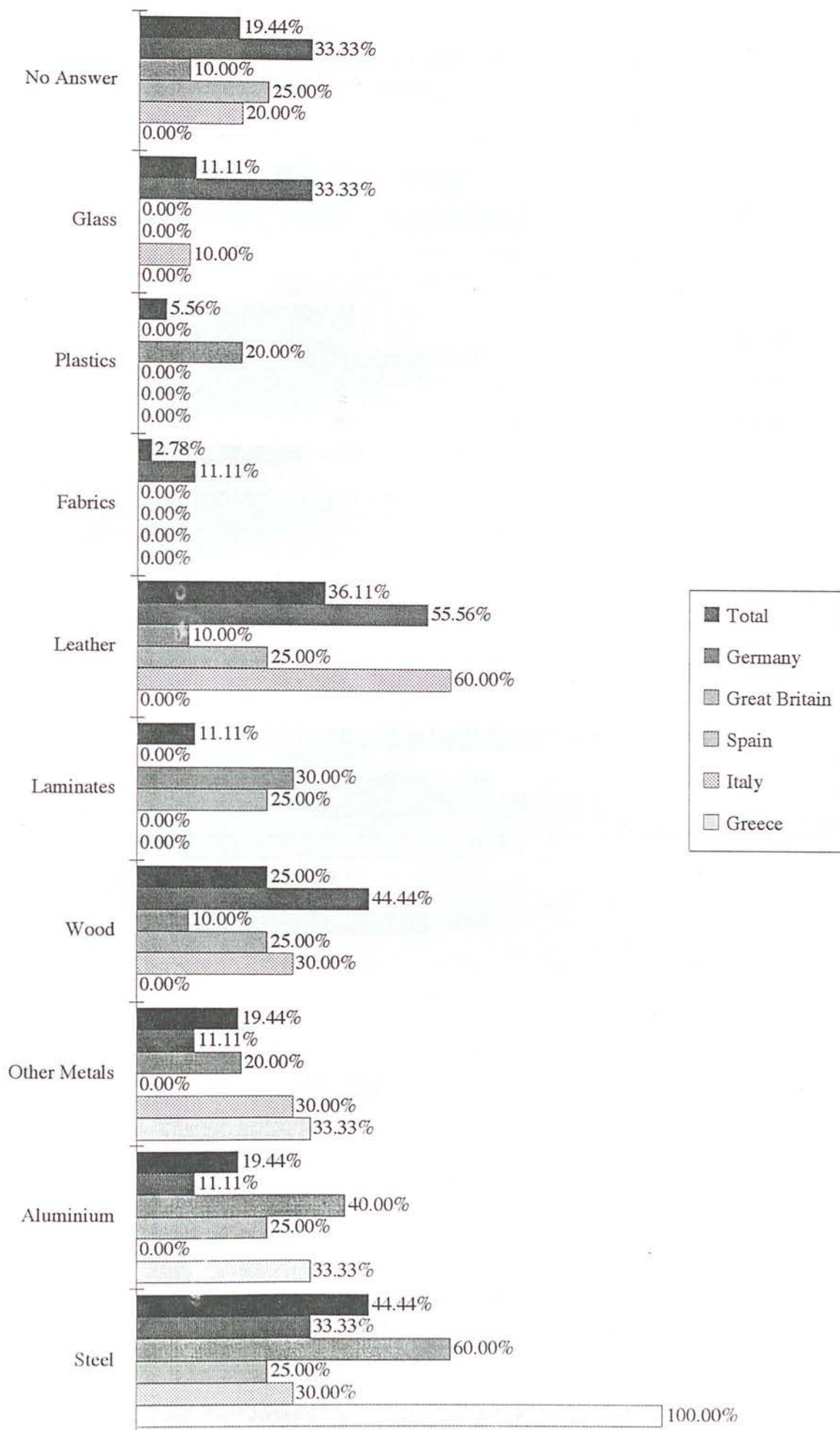


Chart.18.2

Materials related to Austerity



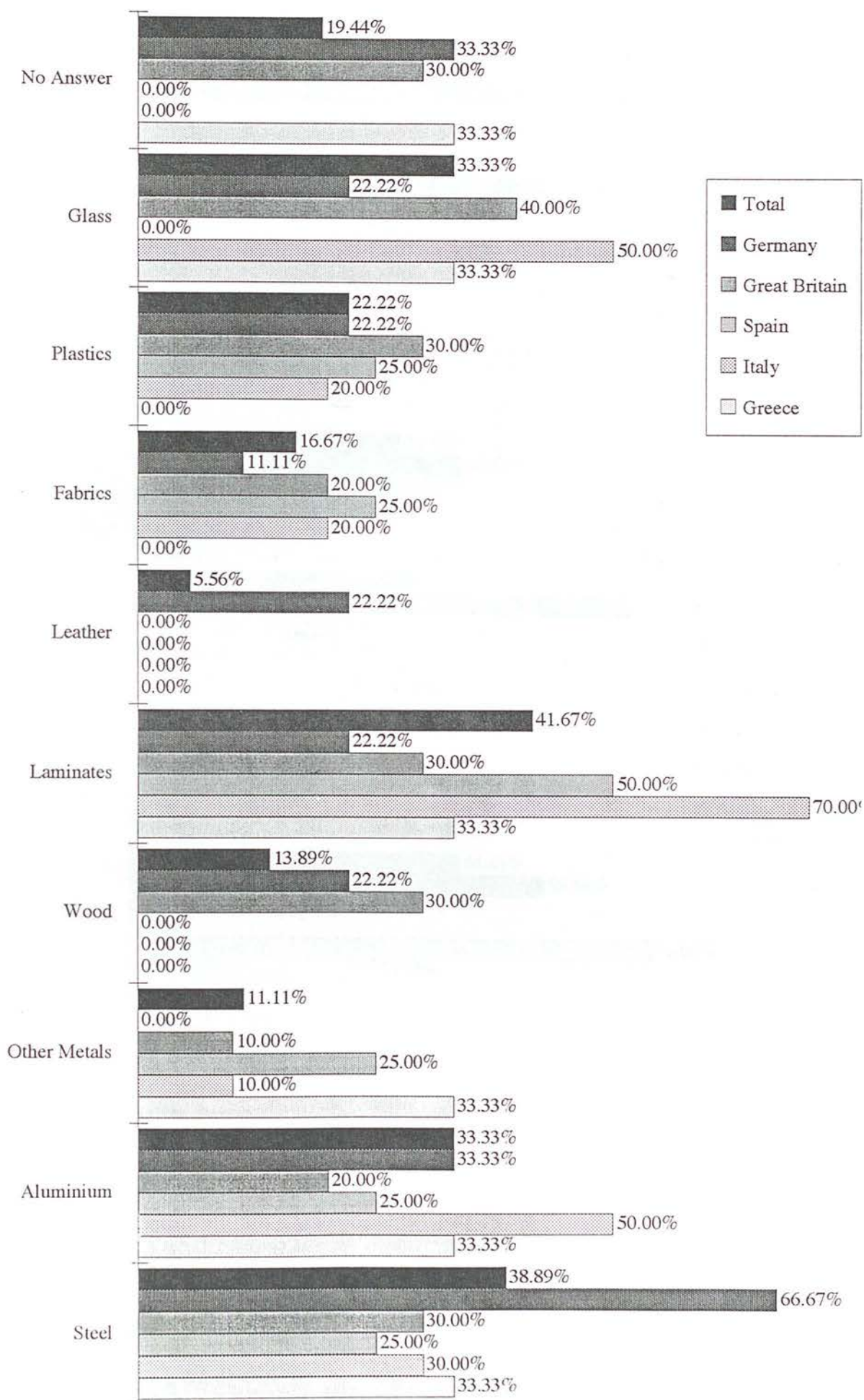


Chart.18.3

Materials related to Rationality

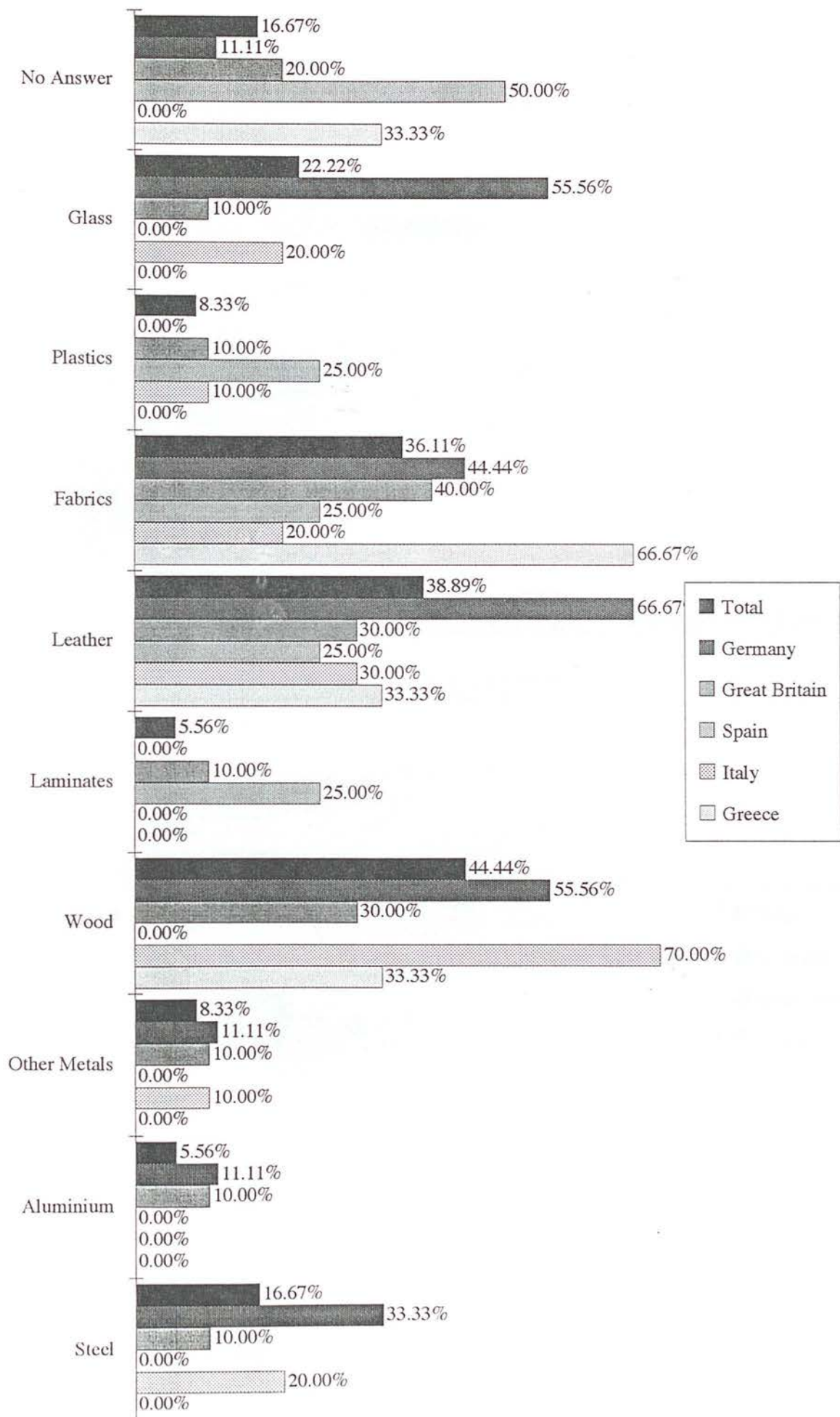


Chart.18.4

Materials related to Individuality

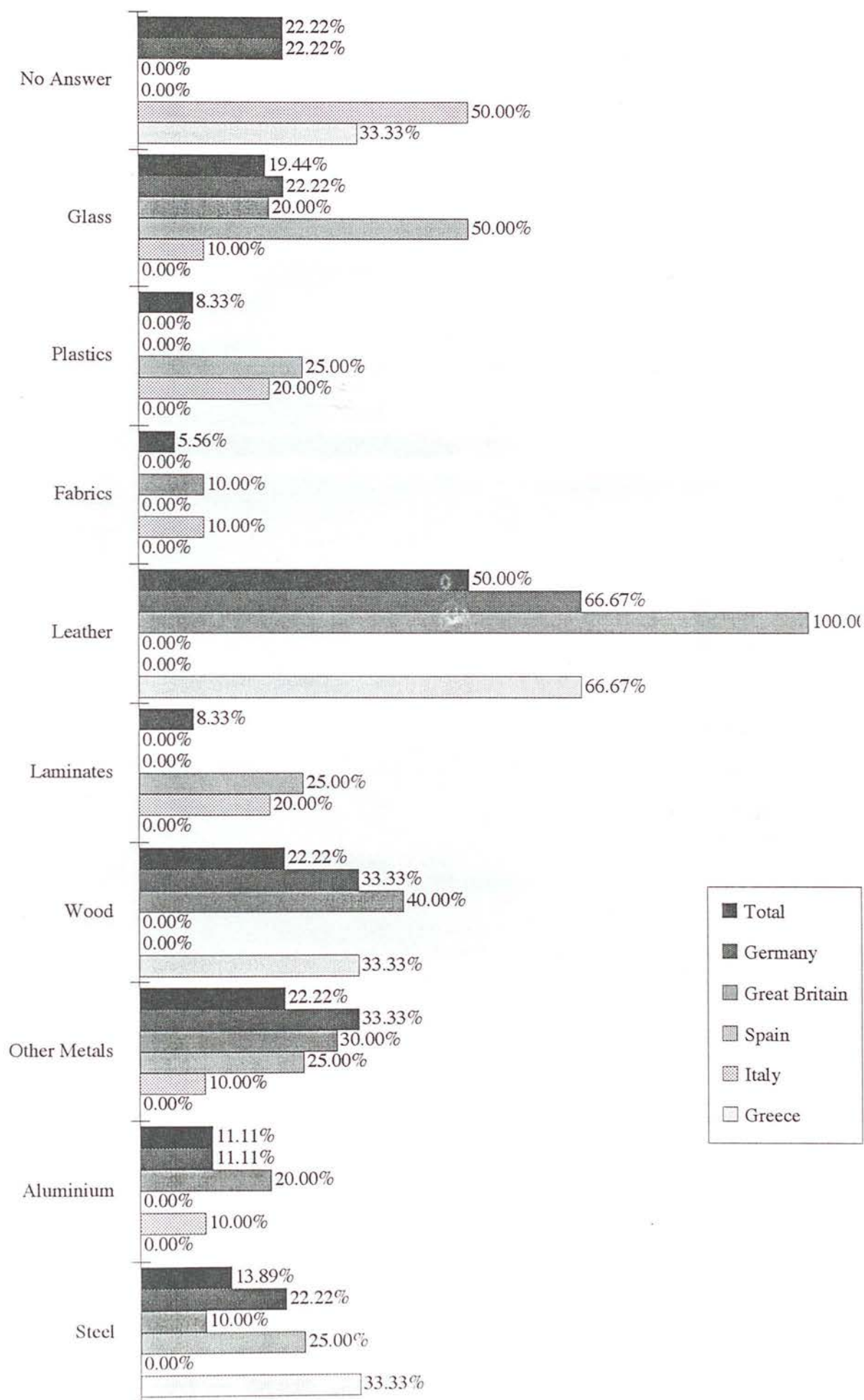


Chart.18.5

Materials related to Affluence



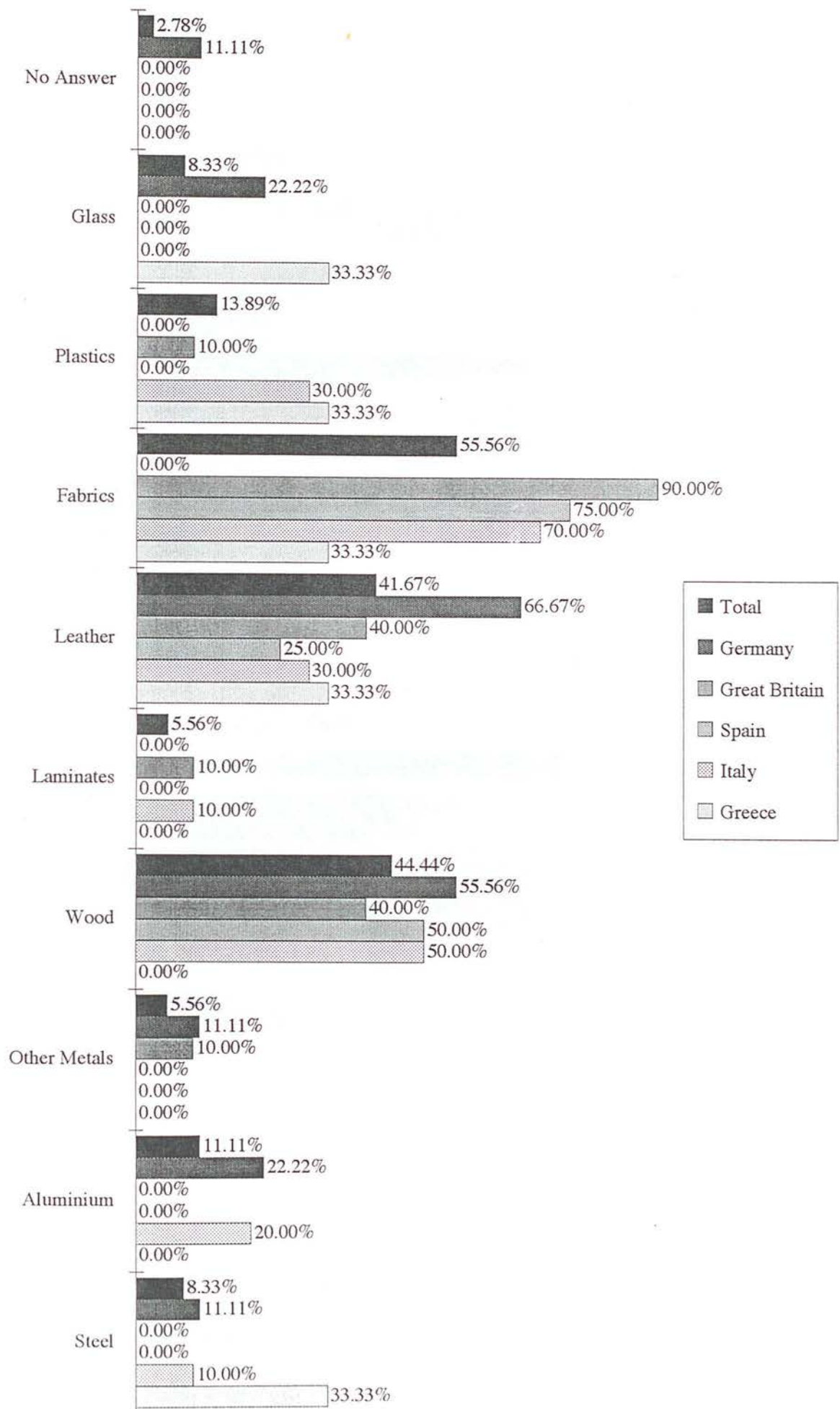


Chart.18.6

Materials related to Comfort

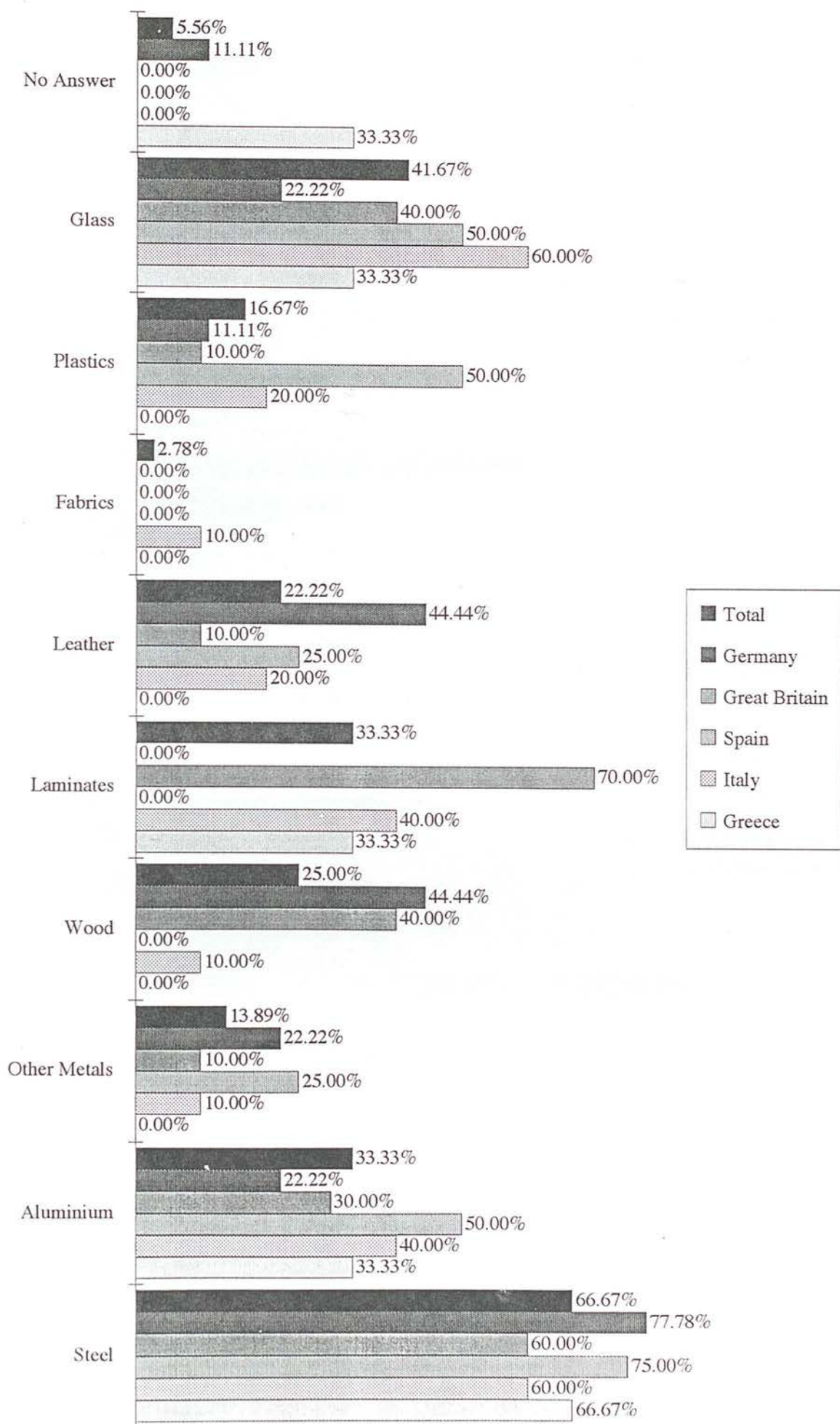


Chart.18.7

Materials related to Durability

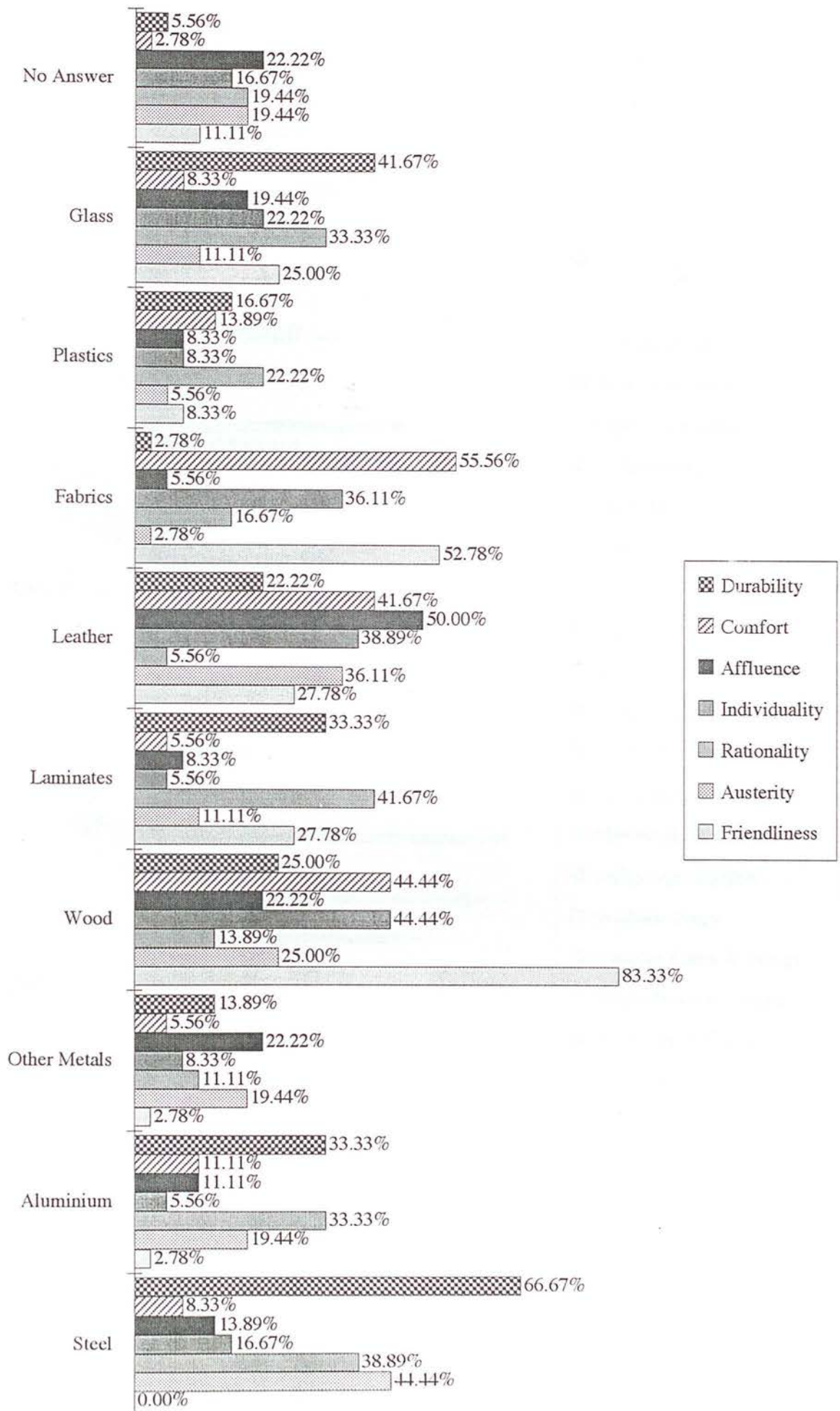


Chart.18.8

Materials related to Concepts



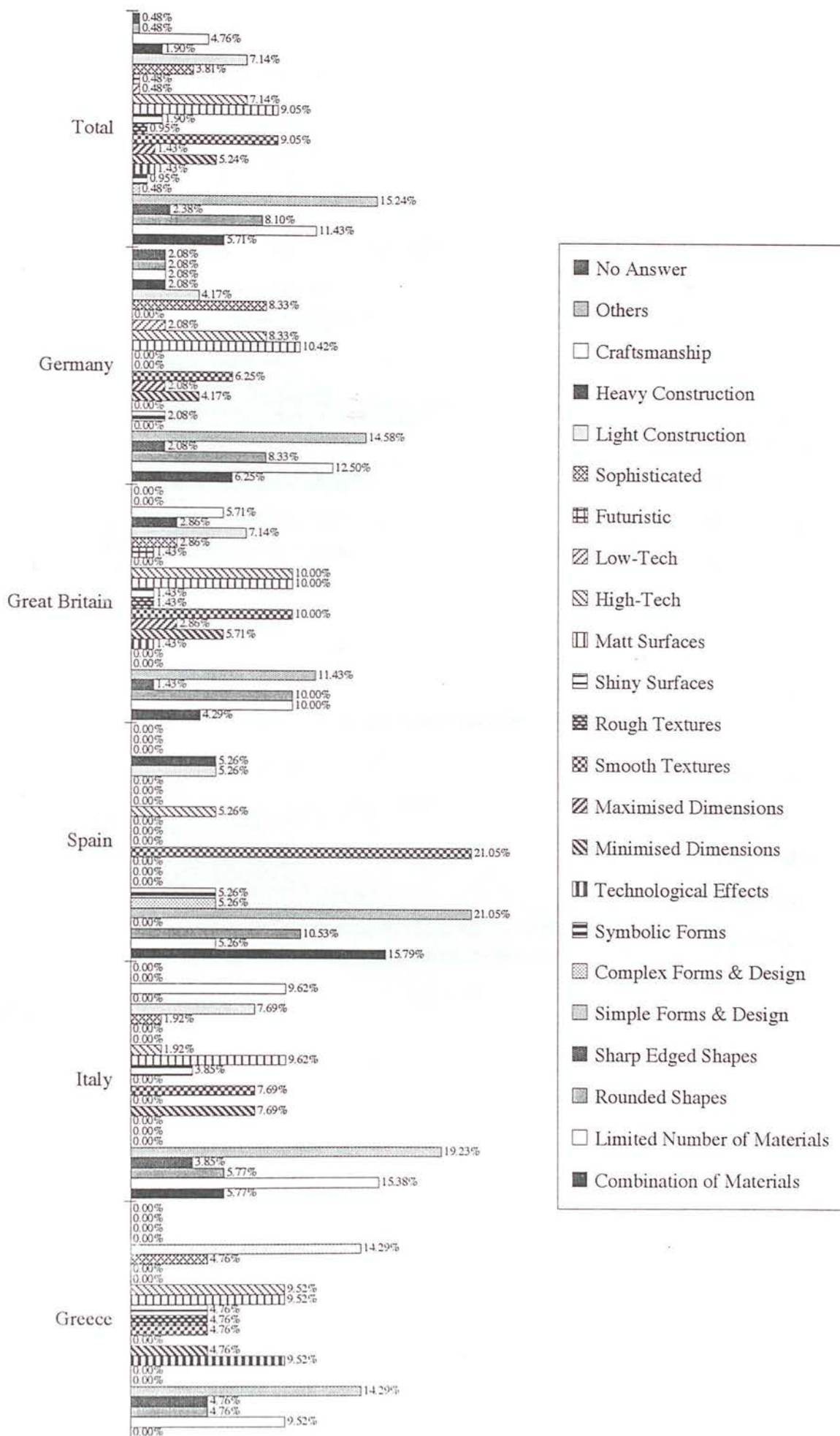


Chart.19.1 Characteristics Representing the Design of the Furniture of Branches

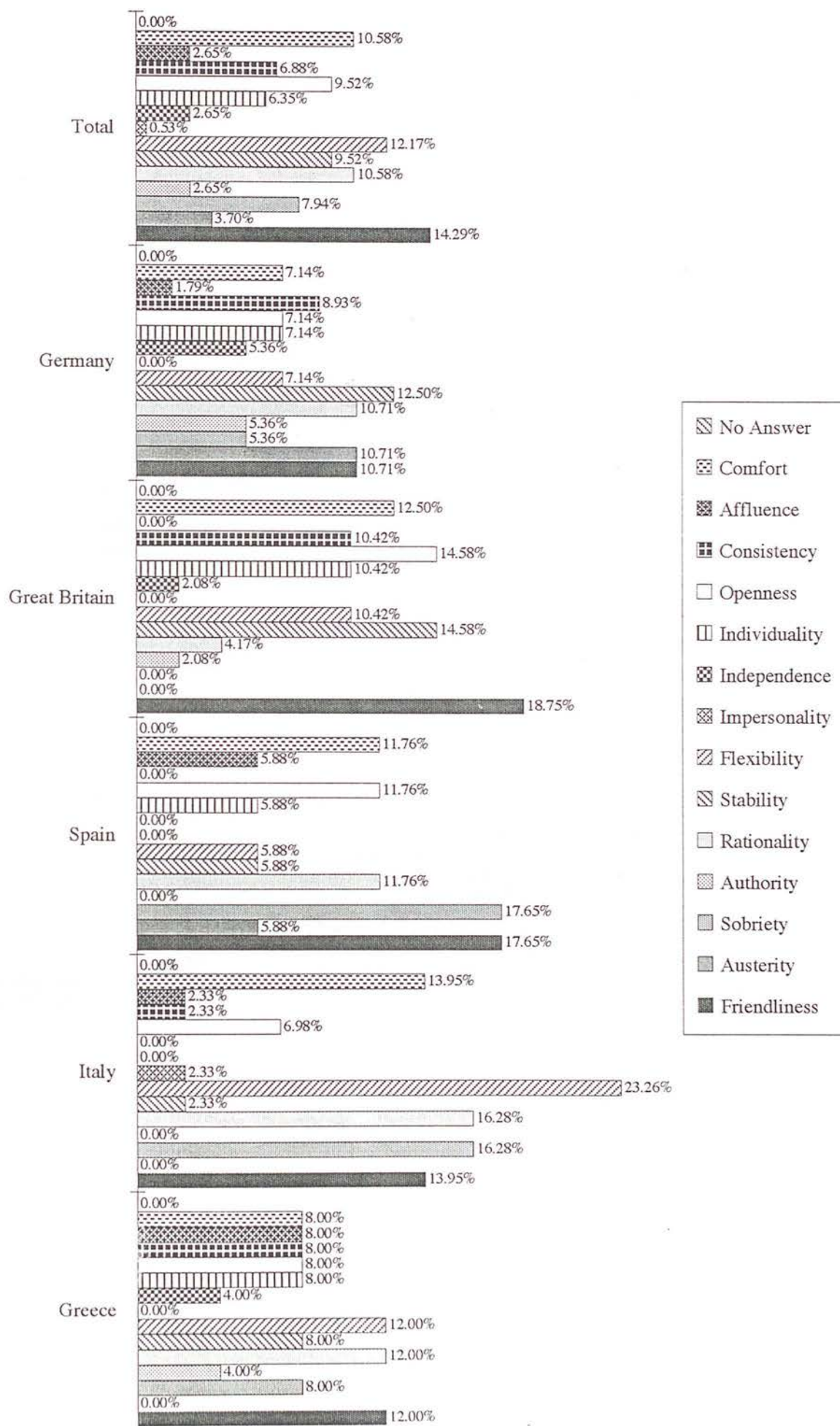


Chart.19.2 Concepts Reflected by the Characterization about the Design of Furniture